

SPON'S

ESTIMATING COSTS GUIDE TO

SMALL GROUNDWORKS,
LANDSCAPING AND
GARDENING

BRYAN SPAIN



2nd Edition

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Spon's Estimating Costs Guide to Small Groundworks, Landscaping and Gardening

Second Edition

Bryan Spain



Taylor & Francis

Taylor & Francis Group

LONDON AND NEW YORK

First published 2005 by Taylor & Francis
Second edition published 2008 by Taylor & Francis
2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN
Simultaneously published in the USA and Canada
by Taylor & Francis
270 Madison Ave, New York, NY 10016

This edition published in the Taylor & Francis e-Library, 2007.

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British Library Cataloguing in Publication Data
A catalogue record for this book is available
from the British Library

ISBN 0-203-93490-3 Master e-book ISBN

ISBN10: 0-415-43442-4 Paperback
ISBN13: 978-0-415-43442-3 Paperback
ISBN10: 0-203-93490-3 eBook
ISBN13: 978-0-203-93490-6 eBook

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Preface

This is the second edition of Spon's Estimating Costs Guide to Small Groundworks, Landscaping and Gardening and is intended to provide accurate cost data for small landscaping and ground works contractors to prepare estimates and quotations more quickly and accurately.

A new section has been added dealing with groundworks covering the construction of foundations for houses and roads and sewers that would be required on small housing estates.

This need for speed and accuracy is vital for all contractors operating in today's competitive construction market. Most contractors have the skills necessary to carry out the work together with the capacity for dealing with the setbacks that are part of the normal construction process. But they rarely have enough time to complete the many tasks that must be carried out in order to trade profitably. This book aims to help contractors by providing thousands of unit rates and, if used sensibly, can save them valuable time in the preparation of their bids.

I have received a great deal of support in the research necessary for this type of book and I am grateful to those individuals and firms who have provided the cost data and other information. In particular, I am indebted to Mark Loughrey of Loughrey & Co. Ltd, Chartered Accountants of Hoylake (tel: 0151-632 3298 or mjloughrey@accounant.com), who are specialists in advising small construction businesses. Their research for the information in the business section is based on tax legislation in force in December 2006.

Although every care has been taken in the preparation of the book, neither the Publisher nor I can accept any responsibility for the use of the information provided by any firm or individual. Finally, I would welcome any constructive criticism of the book's contents and suggestions that could be incorporated into future editions.

Bryan Spain
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April 2007

Introduction

This edition of Spon's Estimating Costs Guide to Small Groundworks, Landscaping and Gardening follows the layout, style and contents of other books in this series. The contents of the book cover unit rates, project costs, repairs, tool and equipment hire, general advice on business matters and other information useful to those involved in the commissioning and construction of landscaping and external works. The unit rates section presents analytical rates for work up to about £50,000 in value and the business section covers advice on starting and running a business together with information on taxation and VAT matters.

Materials

In the domestic construction market, contractors are not usually able to purchase materials in large quantities and cannot benefit from the discounts available to larger contractors. An average of 10% to 15% discount has been allowed on normal trade prices.

Labour

The hourly labour rates for craftsmen and general operatives are based upon the current wage awards. These are set at:

Craftsman	£15.00
General operative	£12.00

These rates include provision for NIC Employers' contribution, CITB levy, insurances, public and annual holidays, severance pay and tool allowances where appropriate.

Headings

The following column headings have been used.

Unit	Labour	Hours £	Materials £	O & P £	Total £
m2	0.20	3.00	2.20	0.78	5.98

Unit

This column shows the unit of measurement for the item description:

nr	number
m	linear metre
m2	square metre
m3	cubic metre.

Labour

In the example shown, 0.20 represents the estimated time estimated to carry out one square metre of the described item, i.e. 0.20 hours.

Hours

The entry of £3.00 is calculated by multiplying the entry in the Labour column by the labour rate of £15.00.

Materials

This column displays the cost of the materials required to carry out one square metre of the described item, i.e. £2.20.

O & P (Overheads and profit)

This has been set at 15% and is deemed to cover head office and site overheads including:

- heating
- lighting
- rent
- rates
- telephones
- secretarial services
- insurances
- finance charges
- transport
- small tools
- ladders
- scaffolding etc.

Total

This is the total of the Hours, Materials and Overheads and Profit columns.

Contracting

Tradesmen and small contractors can act as main contractors (working for a client direct) or as a subcontractor working for another contractor. Although a contract exists between a subcontractor and a main contractor, there is no contractual link between a subcontractor and an Employer.

In general terms this means that the subcontractor cannot make any claims against the Employer direct and vice-versa. It also means that the subcontractor should not accept any instructions from the Employer or his representative because this could be taken as establishing a privity of contract between the two parties,

A subcontractor must be aware of his role in the programme because if he causes a contractor to overrun the completion date for the main contract he may become liable for the full amount of liquidated damages on the main contract plus the cost of damages that the contractor and other subcontractors may have suffered.

A well-organised subcontractor will keep a full set of daily site records, staffing levels, plant on site, weather charts and such like. It also cannot be over emphasised that any verbal instructions that the subcontractor receives, should be confirmed immediately to the contractor in writing with the name of the person who issued them.

This procedure is extremely important because it may eventually save the subcontractor considerable expense if someone tries to lay the blame for delays to the contract at his door. It is also important that instructions should only be taken from the contractor and he should be informed if another party attempts to do so.

Contractor's discount

Most sub-contracts allow for a discount to the contractor of $2\frac{1}{2}\%$ from the subcontractor's account. This means that the subcontractor must add this discount to his prices by adding $1/39$ th to his net rates.

Payment and retention

Payment is normally made on a monthly basis. The subcontractor should submit his account to the contractor who then incorporates it into his own payment application and passes it on to the Architect or Employer's representative for certification of payment. When the subcontractor receives his payment it will be reduced by 5% retention.

This money is held by the Employer and will be released in two parts. The first part, or moiety, is paid at the completion of work and, in the subcontractor's case, this may be either when he has finished his work or when the contractor has completed the contract as a whole (known as practical completion) depending upon the contract conditions. The second part is released at the end of the defects liability period.

This money is held by the Employer and will be released in two parts. The first part, or moiety, is paid at the completion of work and, in the subcontractor's case, this may be either when he has finished his work or when the contractor has completed the contract as a whole (known as practical completion) depending upon the contract conditions. The second part is released at the end of the defects liability period.

Defects liability period

This is the period of time (normally 12 months) during which the sub-contractor is contractually bound to return to the job to rectify any mistakes or bad pieces of workmanship. This could either be twelve months from when he completes his work or twelve months from when the main contract is completed depending upon the wording of the sub contract.

Period for completion

Usually, a sub-contractor will be given a period of time in which he must complete the work and he must ensure that he has the capability to do the work within that period. Failure to meet the agreed completion date could have serious consequences.

Under certain circumstances, however, particularly with nominated sub-contracts, the sub-contractor may be requested to state the period of time he requires to do the work. If this is the case, then careful thought must be given to the time inserted. Too short a time may put him at financial risk but too long a time may prejudice the opportunity of winning the contract.

Damages for non-completion

A clause is usually inserted within each sub-contract stating that the sub-contractor is liable for the financial losses that contractor suffers due to the sub-contractor's non-completion of work on time. This will include the amount of liquidated and ascertained damages contained within the main contract, together with the contractor's own direct losses and the direct losses of his other sub-contractors. As can be seen, the potential cost to the sub-contractor can be large so he must take care to expedite the work with due diligence to avoid incurring these costs.

Variations

All sub-contracts contain a clause allowing the sub-contract work to be varied without invalidating it. The sub-contractor will normally be paid any additional cost he incurs in carrying out variations.

Insurances

The subcontractor is responsible for insuring against injury to persons or property and against loss of plant and materials. These insurances could be taken out for each individual job, although it is more common to take out blanket policies based on the turnover the firm has achieved in the previous year.

Extensions of time

The subcontractor will normally be entitled to a longer period of time to complete the work if he is delayed or interrupted by reasons beyond his control (known as an extension of time). Most sub-contracts list the reasons and in some cases the sub-contractor may also be entitled to additional monies as well as an extension of time.

Domestic sub-contracts

In domestic sub-contracts the contractor would obtain competitive quotations from various subcontractors of his own choice and these may be based on a bill of quantities, specification and drawings, or schedules of work. Accompanying the enquiry should also be a form of sub-contract that the subcontractor will be required to complete.

There are several points that may affect costs and which the subcontractor should bear in mind. These are

1. Whether the rates and prices are to include for any contractor's discount (normally expressed as plus 1/39th to allow 2½%).
2. Whether the contractor is to supply any labour or plant to assist the subcontractor in either carrying out any of the work or in off-loading materials.
3. What facilities (if any) the contractor will provide for the subcontractor such as mess rooms, welfare facilities, office accommodation and storage facilities.
4. Whether the contractor is to dispose of the subcontractor's rubbish.

Contracting

Often a subcontractor will find himself working under a private contract, written or implied. This usually takes the form of working for a domestic householder or a small factory owner and the following procedures usually apply in this type of work.

Estimate

The initial approach would usually come from a purchaser, e.g. 'How much will it cost to have my garden landscaped?' At this stage, he may only want an approximate cost in order to see if he can afford to have the work carried out as opposed to a quotation which is a firm offer to do the work. Therefore, a brief description of the work to be carried out together with an approximate price will suffice.

However, it should be made clear that the price is an estimate and does not constitute an offer that may be accepted by the purchaser. The estimate may be based on a telephone conversation only, e.g. 'It will cost about £4,000 to £ 5,000 to landscape your garden', or it could be based on a brief visit to the house. In either case, little time should be spent on an estimate and it is generally wise to express it as a price range.

Quotation

A quotation is generally seen as an offer to do the work for the price quoted, and could constitute a simple contract if accepted. It follows that some time and effort should be spent in compiling a quotation to save arguments at a later stage. One should always remember that the contractor is the expert and must use his expertise in order to guide the purchaser and should discuss the work with him in full. He should tell the purchaser exactly what he is getting for the price and also what he is not.

This may mean going in to some detail such as what will happen to the surplus excavated materials, how access will be gained, how long the job will take and similar items.

The contractor should also find out from the purchaser exactly what restrictions (if any) will be placed upon him. For instance, will the purchaser keep the drive clear of cars to allow a skip to be used and will the contractor only be allowed entry to the premises on certain days and/or at certain times? These factors, should be ascertained in advance, and the costs of complying with them should be made known to the purchaser who may decide to take steps to change the restrictions.

Once the contractor has considered all the relevant factors then the formal written quotation can be produced. It should state precisely what the purchaser is getting for his money, including when and how long the job will take and contain all the salient points of discussions that have taken place.

After a quotation has been submitted then all that needs to be done is for the purchaser to accept it. Although a verbal acceptance would constitute a binding agreement, it is always more satisfactory if the acceptance is made in writing.

Payments

There is much debate on how and when payments should be made in domestic situations. Ideally from a contractor's point of view to be paid in advance would be the most advantageous, but the chances of the purchaser wishing to do this are remote.

On the other hand, it may cause undue financial hardship to a recently self-employed contractor to have to buy all the materials himself and not get paid until all the work is completed. Whatever payment policy is adopted it must be agreed with the purchaser in advance and form part of the written quotation.

Possible alternatives are

1. Being paid when the work is complete. This is probably the best method from a public relations aspect and contractors who can complete a job in a few days should have no difficulty in adopting this policy.
2. Being paid before the work is done. This is only really feasible where the contractor concerned is of unquestionable reputation or is well known to the purchaser.
3. Being paid for materials as they are bought and delivered with the balance paid when the work is complete. This could be a practical solution for smaller contractors, but the purchaser will probably want proof of the material costs, so careful handling of invoices is necessary.
4. Some form of stage payments that usually take the form of agreed percentages of the quotation price or agreed parts of the quotation price paid after stages of the work have been carried out.

Pricing and variations

It is important that some method of recording, pricing and being paid for variations is agreed at the outset and this is particularly relevant when dealing with private clients. Unforeseen additions, more than any other item, are the main cause of disputes and are often avoidable.

The risk of this type of dispute can be reduced by ensuring that the original quotation is as detailed as possible. The detailed specification of the materials could be contained within the descriptions or done separately. A quotation broken down in this way is detailed enough to enable the purchaser to ascertain that he is not being overcharged for any variations that may occur and yet is not so detailed that the purchaser is going to question the price of every detail.

Also, if the purchaser should wish to change anything himself then there are no arguments on what was included in the original quotation. If variations occur, it must be established who should pay for them. There are three main types of variations.

1. Those instructed by the purchaser.
2. Those that should have been included in the original quotation.
3. Those that are necessary due to events that could not have been foreseen.

The liabilities for 1 and 2 are relatively straightforward. If the purchaser says he wants a different paving flag to his original choice, then he must bear the additional cost. Conversely, if the contractor forgot to include the cost of the sub-base in his quotation then it is only fair that he bears the cost.

Item 3 is more difficult. If it is the purchaser who is receiving the benefit of the variations and if they were not foreseeable, then it would be logical to assume that it is the purchaser who should bear the cost. An example would be where the excavation to a patio revealed old foundations underneath, the contractor would expect to be paid the extra cost for removing them.

Other instances may not be as clear cut as this example and it may become necessary to arrive at a cost-sharing arrangement if genuine doubt exists. Variations should preferably be agreed in advance before the work is carried out. They should be recorded and signed by both parties and, wherever possible, priced in detail and agreed.

Standard Method of Measurement/trades links

The contents of this book are presented under trade headings and the following table provides a link to the Standard Method of Measurement (SMM7).

External works

- R12 Drainage below ground
- Q40 Fencing
- Q10 Concrete kerbs and edgings
- Q20 Hardcore/granular sub-bases
- Q25 Slab/brick pavings

Part One

UNIT RATES

Soft landscaping

Soil stabilisation

Excavation and filling

Seeding and turfing

Bare root trees

Container grown trees

Conifers

Shrubs

Climbers

Herbaceous plants

Hedging

Bedding plants

Maintenance

Sundries

Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
------	--------	------------	-------------	------------	------------

SOIL STABILISATION

Biodegradable unseeded
erosion control mats
2400mm wide fixed with
pins to prepared ground

Eromat Light	m2	0.05	0.75	2.56	0.50	3.81
Eromat Standard	m2	0.05	0.75	2.63	0.51	3.89
Eromat Coco	m2	0.05	0.75	2.65	0.51	3.91

Biodegradable seeded
erosion control mats
2400mm wide fixed with
pins to prepared ground

Covamat Standard	m2	0.05	0.75	2.92	0.55	4.22
Covamat Special	m2	0.05	0.75	3.14	0.58	4.47
Covamat Coco	m2	0.05	0.75	3.14	0.58	4.47

EXCAVATION AND FILLING**Excavation by hand**

The following rates are
based on excavating in
firm ground. The following
adjustments should be
made for other conditions:

stiff clay + 50%
soft chalk + 100%

Remove undergrowth and site vegetation	m2	0.15	2.25	-	0.34	2.59
---	----	------	------	---	------	------

4 Soft landscaping

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Cut down trees, grub up roots and remove						
girth, 600–1500mm	nr	20.00	300.00	-	45.00	345.00
girth, 1500–3000mm	nr	44.00	660.00	-	99.00	759.00
Cut down hedge, grub up roots and remove						
height, 1500mm	m	2.00	30.00	-	4.50	34.50
height, 3000mm	m	2.80	42.00	-	6.30	48.30
Excavate topsoil or turf and lay aside for re-use						
150mm thick	m2	0.35	5.25	-	0.79	6.04
200mm thick	m2	0.45	6.75	-	1.01	7.76
250mm thick	m2	0.60	9.00	-	1.35	10.35
Excavate to reduce levels depth not exceeding						
250mm thick	m3	2.20	33.00	-	4.95	37.95
500mm thick	m3	2.40	36.00	-	5.40	41.40
Excavate trenches depth not exceeding						
250mm thick	m3	2.40	36.00	-	5.40	41.40
500mm thick	m3	2.50	37.50	-	5.63	43.13
1000mm thick	m3	2.60	39.00	-	5.85	44.85
1500mm thick	m3	2.80	42.00	-	6.30	48.30

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Excavate pits depth not exceeding						
250mm thick	m3	2.60	39.00	-	5.85	44.85
500mm thick	m3	2.70	40.50	-	6.08	46.58
1000mm thick	m3	2.80	42.00	-	6.30	48.30
1500mm thick	m3	2.90	43.50	-	6.53	50.03

Extra for excavating through

rock	m3	10.00	150.00	-	22.50	172.50
concrete	m3	8.00	120.00	-	18.00	138.00
brickwork	m3	6.00	90.00	-	13.50	103.50

Disposal by hand

Load surplus excavated material into barrows, wheel and deposit in temporary spoil heaps, skip or lorry

distance, 25m	m3	1.20	18.00	-	2.70	20.70
distance, 50m	m3	2.00	30.00	-	4.50	34.50

Load surplus excavated material into barrows, wheel and spread and level on site

distance, 25m	m3	1.40	21.00	-	3.15	24.15
distance, 50m	m3	2.20	33.00	-	4.95	37.95

6 Soft landscaping

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Filling by hand						
Surplus excavated material deposited and compacted in layers						
over 250mm thick	m3	1.20	18.00	-	2.70	20.70
100mm thick	m2	0.20	3.00	-	0.45	3.45
150mm thick	m2	0.35	5.25	-	0.79	6.04
200mm thick	m2	0.50	7.50	-	1.13	8.63
Imported sand deposited and compacted in layers						
over 250mm thick	m3	1.20	18.00	33.91	7.79	59.70
100mm thick	m2	0.20	3.00	3.91	1.04	7.95
150mm thick	m2	0.35	5.25	5.86	1.67	12.78
200mm thick	m2	0.50	7.50	7.82	2.30	17.62
Imported hardcore deposited and compacted in layers						
over 250mm thick	m3	1.20	18.00	20.02	5.70	43.72
100mm thick	m2	0.20	3.00	2.02	0.75	5.77
150mm thick	m2	0.35	5.25	3.03	1.24	9.52
200mm thick	m2	0.50	7.50	4.04	1.73	13.27
Imported topsoil deposited and compacted in layers						
over 250mm thick	m3	1.20	18.00	15.20	4.98	38.18
100mm thick	m2	0.20	3.00	1.52	0.68	5.20
150mm thick	m2	0.35	5.25	2.28	1.13	8.66
200mm thick	m2	0.50	7.50	3.04	1.58	12.12

	Unit	Plant £	Mat'ls £	O & P £	Total £
Excavation by machine					
Where applicable the plant column includes the cost of the operator.					
The following rates are based on excavating in firm ground. The following adjustments should be made for other conditions:					
stiff clay + 50%					
soft chalk + 100%					
Remove undergrowth and site vegetation	m2	0.17	-	0.03	0.20
Cut down trees, grub up roots and remove					
girth, 600-1500mm	nr	200.00	-	30.00	230.00
girth, 1500-3000mm	nr	527.60	-	79.14	606.74
Cut down hedge, grub up roots and remove					
height, 1500mm	m	17.36	-	2.60	19.96
height, 3000mm	m	30.40	-	4.56	34.96
Excavate topsoil or turf and lay aside for re-use					
150mm thick	m2	0.33	-	0.05	0.38
200mm thick	m2	0.44	-	0.07	0.51
250mm thick	m2	0.54	-	0.08	0.62

8 Soft landscaping

	Unit	Plant £	Mat'ls £	O & P £	Total £
Excavate to reduce levels depth not exceeding					
250mm thick	m3	1.62	-	0.24	1.86
500mm thick	m3	1.52	-	0.23	1.75
Excavate trenches depth not exceeding					
250mm thick	m3	3.47	-	0.52	3.99
500mm thick	m3	3.37	-	0.51	3.88
1000mm thick	m3	3.26	-	0.49	3.75
1500mm thick	m3	3.15	-	0.47	3.62
Excavate pits depth not exceeding					
250mm thick	m3	3.58	-	0.54	4.12
500mm thick	m3	3.47	-	0.52	3.99
1000mm thick	m3	3.37	-	0.51	3.88
1500mm thick	m3	3.26	-	0.49	3.75
Extra for excavating through					
rock	m3	71.65	-	10.75	82.40
concrete	m3	60.80	-	9.12	69.92
brickwork	m3	47.76	-	7.16	54.92
Disposal by machine					
Load surplus excavated material into lorries and cart away to tip					
distance, 10km	m3	17.96	-	2.69	20.65
distance, 15km	m3	19.54	-	2.93	22.47

	Unit	Plant £	Mat'ls £	O & P £	Total £
Filling by machine					
Surplus excavated material deposited and compacted in layers					
over 250mm thick	m3	7.84	-	1.18	9.02
100mm thick	m2	1.20	-	0.18	1.38
150mm thick	m2	1.35	-	0.20	1.55
200mm thick	m2	1.50	-	0.23	1.73
Imported sand deposited and compacted in layers					
over 250mm thick	m3	7.84	33.91	6.26	48.01
100mm thick	m2	1.20	3.39	0.69	5.28
150mm thick	m2	1.35	5.08	0.96	7.39
200mm thick	m2	1.50	7.78	1.39	10.67
Imported hardcore deposited and compacted in layers					
over 250mm thick	m3	7.84	20.02	4.18	32.04
100mm thick	m2	1.20	2.02	0.48	3.70
150mm thick	m2	1.35	3.03	0.66	5.04
200mm thick	m2	1.50	4.04	0.83	6.37
Imported topsoil deposited and compacted in layers					
over 250mm thick	m3	7.84	15.20	3.46	26.50
100mm thick	m2	1.20	1.52	0.41	3.13
150mm thick	m2	1.35	2.28	0.54	4.17
200mm thick	m2	1.50	3.04	0.68	5.22

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
SEEDING AND TURFING						
Imported topsoil deposited in spoil heaps	m3	-	-	15.22	2.28	17.50
Pre-seeding work by hand						
Lift topsoil from spoil heaps and spread and level in layers						
75mm thick	m2	0.03	0.45	-	0.07	0.52
100mm thick	m2	0.05	0.75	-	0.11	0.86
150mm thick	m2	0.07	1.05	-	0.16	1.21
Rake topsoil to a fine tilth	m2	0.04	0.60	-	0.09	0.69
Grass seeding by hand						
Sow grass seed on prepared ground						
PC £60.00 per 25kg						
10g per m2	m2	0.01	0.15	0.03	0.03	0.21
12g per m2	m2	0.01	0.15	0.03	0.03	0.21
14g per m2	m2	0.01	0.15	0.04	0.03	0.22
16g per m2	m2	0.01	0.15	0.04	0.03	0.22
18g per m2	m2	0.01	0.15	0.04	0.03	0.22
20g per m2	m2	0.01	0.15	0.05	0.03	0.23
22g per m2	m2	0.01	0.15	0.05	0.03	0.23
24g per m2	m2	0.01	0.15	0.05	0.03	0.23
26g per m2	m2	0.02	0.30	0.06	0.05	0.41
28g per m2	m2	0.02	0.30	0.06	0.05	0.41
30g per m2	m2	0.02	0.30	0.07	0.06	0.43

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
32g per m2	m2	0.02	0.30	0.07	0.06	0.43
34g per m2	m2	0.02	0.30	0.07	0.06	0.43
36g per m2	m2	0.02	0.30	0.08	0.06	0.44
38g per m2	m2	0.02	0.30	0.08	0.06	0.44
40g per m2	m2	0.03	0.45	0.09	0.08	0.62
42g per m2	m2	0.03	0.45	0.09	0.08	0.62
44g per m2	m2	0.03	0.45	0.09	0.08	0.62
46g per m2	m2	0.03	0.45	0.10	0.08	0.63
48g per m2	m2	0.03	0.45	0.10	0.08	0.63
50g per m2	m2	0.03	0.45	0.10	0.08	0.63
PC £70.00 per 25kg						
10g per m2	m2	0.01	0.15	0.04	0.03	0.22
12g per m2	m2	0.01	0.15	0.04	0.03	0.22
14g per m2	m2	0.01	0.15	0.05	0.03	0.23
16g per m2	m2	0.01	0.15	0.05	0.03	0.23
18g per m2	m2	0.01	0.15	0.06	0.03	0.24
20g per m2	m2	0.01	0.15	0.07	0.03	0.25
22g per m2	m2	0.01	0.15	0.07	0.03	0.25
24g per m2	m2	0.01	0.15	0.08	0.03	0.26
26g per m2	m2	0.02	0.30	0.09	0.06	0.45
28g per m2	m2	0.02	0.30	0.09	0.06	0.45
30g per m2	m2	0.02	0.30	0.10	0.06	0.46
32g per m2	m2	0.02	0.30	0.10	0.06	0.46
34g per m2	m2	0.02	0.30	0.11	0.06	0.47
36g per m2	m2	0.02	0.30	0.12	0.06	0.48
38g per m2	m2	0.02	0.30	0.12	0.06	0.48
40g per m2	m2	0.03	0.45	0.13	0.09	0.67
42g per m2	m2	0.03	0.45	0.13	0.09	0.67
44g per m2	m2	0.03	0.45	0.14	0.09	0.68
46g per m2	m2	0.03	0.45	0.14	0.09	0.68
48g per m2	m2	0.03	0.45	0.15	0.09	0.69
50g per m2	m2	0.03	0.45	0.16	0.09	0.70

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Grass seeding by hand (cont'd)						
PC £80.00 per 25kg						
10g per m2	m2	0.01	0.15	0.04	0.03	0.22
12g per m2	m2	0.01	0.15	0.04	0.03	0.22
14g per m2	m2	0.01	0.15	0.05	0.03	0.23
16g per m2	m2	0.01	0.15	0.05	0.03	0.23
18g per m2	m2	0.01	0.15	0.06	0.03	0.24
20g per m2	m2	0.01	0.15	0.07	0.03	0.25
22g per m2	m2	0.01	0.15	0.07	0.03	0.25
24g per m2	m2	0.01	0.15	0.08	0.03	0.26
26g per m2	m2	0.02	0.30	0.09	0.06	0.45
28g per m2	m2	0.02	0.30	0.09	0.06	0.45
30g per m2	m2	0.02	0.30	0.10	0.06	0.46
32g per m2	m2	0.02	0.30	0.10	0.06	0.46
34g per m2	m2	0.02	0.30	0.11	0.06	0.47
36g per m2	m2	0.02	0.30	0.12	0.06	0.48
38g per m2	m2	0.02	0.30	0.12	0.06	0.48
40g per m2	m2	0.03	0.45	0.13	0.09	0.67
42g per m2	m2	0.03	0.45	0.13	0.09	0.67
44g per m2	m2	0.03	0.45	0.14	0.09	0.68
46g per m2	m2	0.03	0.45	0.14	0.09	0.68
48g per m2	m2	0.03	0.45	0.15	0.09	0.69
50g per m2	m2	0.03	0.45	0.16	0.09	0.70
PC £90.00 per 25kg						
10g per m2	m2	0.01	0.15	0.04	0.03	0.22
12g per m2	m2	0.01	0.15	0.04	0.03	0.22
14g per m2	m2	0.01	0.15	0.05	0.03	0.23
16g per m2	m2	0.01	0.15	0.05	0.03	0.23
18g per m2	m2	0.01	0.15	0.06	0.03	0.24
20g per m2	m2	0.01	0.15	0.07	0.03	0.25
22g per m2	m2	0.01	0.15	0.07	0.03	0.25
24g per m2	m2	0.01	0.15	0.08	0.03	0.26
26g per m2	m2	0.02	0.30	0.09	0.06	0.45

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
28g per m2	m2	0.02	0.30	0.09	0.06	0.45
30g per m2	m2	0.02	0.30	0.10	0.06	0.46
32g per m2	m2	0.02	0.30	0.10	0.06	0.46
34g per m2	m2	0.02	0.30	0.11	0.06	0.47
36g per m2	m2	0.02	0.30	0.12	0.06	0.48
38g per m2	m2	0.02	0.30	0.12	0.06	0.48
40g per m2	m2	0.03	0.45	0.13	0.09	0.67
42g per m2	m2	0.03	0.45	0.13	0.09	0.67
44g per m2	m2	0.03	0.45	0.14	0.09	0.68
46g per m2	m2	0.03	0.45	0.14	0.09	0.68
48g per m2	m2	0.03	0.45	0.15	0.09	0.69
50g per m2	m2	0.03	0.45	0.16	0.09	0.70
PC £100.00 per 25kg						
10g per m2	m2	0.01	0.15	0.05	0.03	0.23
12g per m2	m2	0.01	0.15	0.06	0.03	0.24
14g per m2	m2	0.01	0.15	0.07	0.03	0.25
16g per m2	m2	0.01	0.15	0.07	0.03	0.25
18g per m2	m2	0.01	0.15	0.08	0.03	0.26
20g per m2	m2	0.01	0.15	0.09	0.04	0.28
22g per m2	m2	0.01	0.15	0.10	0.04	0.29
24g per m2	m2	0.01	0.15	0.11	0.04	0.30
26g per m2	m2	0.02	0.30	0.11	0.06	0.47
28g per m2	m2	0.02	0.30	0.12	0.06	0.48
30g per m2	m2	0.02	0.30	0.13	0.06	0.49
32g per m2	m2	0.02	0.30	0.14	0.07	0.51
34g per m2	m2	0.02	0.30	0.14	0.07	0.51
36g per m2	m2	0.02	0.30	0.15	0.07	0.52
38g per m2	m2	0.02	0.30	0.16	0.07	0.53
40g per m2	m2	0.03	0.45	0.17	0.09	0.71
42g per m2	m2	0.03	0.45	0.18	0.09	0.72
44g per m2	m2	0.03	0.45	0.18	0.09	0.72
46g per m2	m2	0.03	0.45	0.19	0.10	0.74
48g per m2	m2	0.03	0.45	0.20	0.10	0.75
50g per m2	m2	0.03	0.45	0.21	0.10	0.76

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Grass seeding by hand (cont'd)						
PC £110.00 per 25kg						
10g per m2	m2	0.01	0.15	0.05	0.03	0.23
12g per m2	m2	0.01	0.15	0.06	0.03	0.24
14g per m2	m2	0.01	0.15	0.07	0.03	0.25
16g per m2	m2	0.01	0.15	0.07	0.03	0.25
18g per m2	m2	0.01	0.15	0.08	0.03	0.26
20g per m2	m2	0.01	0.15	0.09	0.04	0.28
22g per m2	m2	0.01	0.15	0.10	0.04	0.29
24g per m2	m2	0.01	0.15	0.11	0.04	0.30
26g per m2	m2	0.02	0.30	0.11	0.06	0.47
28g per m2	m2	0.02	0.30	0.12	0.06	0.48
30g per m2	m2	0.02	0.30	0.13	0.06	0.49
32g per m2	m2	0.02	0.30	0.14	0.07	0.51
34g per m2	m2	0.02	0.30	0.14	0.07	0.51
36g per m2	m2	0.02	0.30	0.15	0.07	0.52
38g per m2	m2	0.02	0.30	0.16	0.07	0.53
40g per m2	m2	0.03	0.45	0.17	0.09	0.71
42g per m2	m2	0.03	0.45	0.18	0.09	0.72
44g per m2	m2	0.03	0.45	0.18	0.09	0.72
46g per m2	m2	0.03	0.45	0.19	0.10	0.74
48g per m2	m2	0.03	0.45	0.20	0.10	0.75
50g per m2	m2	0.03	0.45	0.21	0.10	0.76
PC £120.00 per 25kg						
10g per m2	m2	0.01	0.15	0.06	0.03	0.24
12g per m2	m2	0.01	0.15	0.07	0.03	0.25
14g per m2	m2	0.01	0.15	0.08	0.03	0.26
16g per m2	m2	0.01	0.15	0.09	0.04	0.28
18g per m2	m2	0.01	0.15	0.10	0.04	0.29
20g per m2	m2	0.01	0.15	0.11	0.04	0.30
22g per m2	m2	0.01	0.15	0.12	0.04	0.31
24g per m2	m2	0.01	0.15	0.13	0.04	0.32
26g per m2	m2	0.02	0.30	0.14	0.07	0.51

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
28g per m2	m2	0.02	0.30	0.15	0.07	0.52
30g per m2	m2	0.02	0.30	0.16	0.07	0.53
32g per m2	m2	0.02	0.30	0.17	0.07	0.54
34g per m2	m2	0.02	0.30	0.18	0.07	0.55
36g per m2	m2	0.02	0.30	0.19	0.07	0.56
38g per m2	m2	0.02	0.30	0.20	0.08	0.58
40g per m2	m2	0.03	0.45	0.21	0.10	0.76
42g per m2	m2	0.03	0.45	0.22	0.10	0.77
44g per m2	m2	0.03	0.45	0.23	0.10	0.78
46g per m2	m2	0.03	0.45	0.24	0.10	0.79
48g per m2	m2	0.03	0.45	0.25	0.11	0.81
50g per m2	m2	0.03	0.45	0.26	0.11	0.82
PC £130.00 per 25kg						
10g per m2	m2	0.01	0.15	0.06	0.03	0.24
12g per m2	m2	0.01	0.15	0.07	0.03	0.25
14g per m2	m2	0.01	0.15	0.08	0.03	0.26
16g per m2	m2	0.01	0.15	0.09	0.04	0.28
18g per m2	m2	0.01	0.15	0.10	0.04	0.29
20g per m2	m2	0.01	0.15	0.11	0.04	0.30
22g per m2	m2	0.01	0.15	0.12	0.04	0.31
24g per m2	m2	0.01	0.15	0.13	0.04	0.32
26g per m2	m2	0.02	0.30	0.14	0.07	0.51
28g per m2	m2	0.02	0.30	0.15	0.07	0.52
30g per m2	m2	0.02	0.30	0.16	0.07	0.53
32g per m2	m2	0.02	0.30	0.17	0.07	0.54
34g per m2	m2	0.02	0.30	0.18	0.07	0.55
36g per m2	m2	0.02	0.30	0.19	0.07	0.56
38g per m2	m2	0.02	0.30	0.20	0.08	0.58
40g per m2	m2	0.03	0.45	0.21	0.10	0.76
42g per m2	m2	0.03	0.45	0.22	0.10	0.77
44g per m2	m2	0.03	0.45	0.23	0.10	0.78
46g per m2	m2	0.03	0.45	0.24	0.10	0.79
48g per m2	m2	0.03	0.45	0.25	0.11	0.81
50g per m2	m2	0.03	0.45	0.26	0.11	0.82

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Grass seeding by hand (cont'd)						
PC £140.00 per 25kg						
10g per m2	m2	0.01	0.15	0.06	0.03	0.24
12g per m2	m2	0.01	0.15	0.07	0.03	0.25
14g per m2	m2	0.01	0.15	0.08	0.03	0.26
16g per m2	m2	0.01	0.15	0.09	0.04	0.28
18g per m2	m2	0.01	0.15	0.10	0.04	0.29
20g per m2	m2	0.01	0.15	0.11	0.04	0.30
22g per m2	m2	0.01	0.15	0.12	0.04	0.31
24g per m2	m2	0.01	0.15	0.13	0.04	0.32
26g per m2	m2	0.02	0.30	0.14	0.07	0.51
28g per m2	m2	0.02	0.30	0.15	0.07	0.52
30g per m2	m2	0.02	0.30	0.16	0.07	0.53
32g per m2	m2	0.02	0.30	0.17	0.07	0.54
34g per m2	m2	0.02	0.30	0.18	0.07	0.55
36g per m2	m2	0.02	0.30	0.19	0.07	0.56
38g per m2	m2	0.02	0.30	0.20	0.08	0.58
40g per m2	m2	0.03	0.45	0.21	0.10	0.76
42g per m2	m2	0.03	0.45	0.22	0.10	0.77
44g per m2	m2	0.03	0.45	0.23	0.10	0.78
46g per m2	m2	0.03	0.45	0.24	0.10	0.79
48g per m2	m2	0.03	0.45	0.25	0.11	0.81
50g per m2	m2	0.03	0.45	0.26	0.11	0.82
PC £150.00 per 25kg						
10g per m2	m2	0.01	0.15	0.07	0.03	0.25
12g per m2	m2	0.01	0.15	0.08	0.03	0.26
14g per m2	m2	0.01	0.15	0.09	0.04	0.28
16g per m2	m2	0.01	0.15	0.11	0.04	0.30
18g per m2	m2	0.01	0.15	0.12	0.04	0.31
20g per m2	m2	0.01	0.15	0.13	0.04	0.32
22g per m2	m2	0.01	0.15	0.14	0.04	0.33
24g per m2	m2	0.01	0.15	0.15	0.05	0.35
26g per m2	m2	0.02	0.30	0.16	0.07	0.53

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
28g per m2	m2	0.02	0.30	0.17	0.07	0.54
30g per m2	m2	0.02	0.30	0.18	0.07	0.55
32g per m2	m2	0.02	0.30	0.19	0.07	0.56
34g per m2	m2	0.02	0.30	0.21	0.08	0.59
36g per m2	m2	0.02	0.30	0.22	0.08	0.60
38g per m2	m2	0.02	0.30	0.23	0.08	0.61
40g per m2	m2	0.03	0.45	0.25	0.11	0.81
42g per m2	m2	0.03	0.45	0.26	0.11	0.82
44g per m2	m2	0.03	0.45	0.27	0.11	0.83
46g per m2	m2	0.03	0.45	0.28	0.11	0.84
48g per m2	m2	0.03	0.45	0.30	0.11	0.86
50g per m2	m2	0.03	0.45	0.31	0.11	0.87
PC £160.00 per 25kg						
10g per m2	m2	0.01	0.15	0.07	0.03	0.25
12g per m2	m2	0.01	0.15	0.08	0.03	0.26
14g per m2	m2	0.01	0.15	0.09	0.04	0.28
16g per m2	m2	0.01	0.15	0.11	0.04	0.30
18g per m2	m2	0.01	0.15	0.12	0.04	0.31
20g per m2	m2	0.01	0.15	0.13	0.04	0.32
22g per m2	m2	0.01	0.15	0.14	0.04	0.33
24g per m2	m2	0.01	0.15	0.15	0.05	0.35
26g per m2	m2	0.02	0.30	0.16	0.07	0.53
28g per m2	m2	0.02	0.30	0.17	0.07	0.54
30g per m2	m2	0.02	0.30	0.18	0.07	0.55
32g per m2	m2	0.02	0.30	0.19	0.07	0.56
34g per m2	m2	0.02	0.30	0.21	0.08	0.59
36g per m2	m2	0.02	0.30	0.22	0.08	0.60
38g per m2	m2	0.02	0.30	0.23	0.08	0.61
40g per m2	m2	0.03	0.45	0.25	0.11	0.81
42g per m2	m2	0.03	0.45	0.26	0.11	0.82
44g per m2	m2	0.03	0.45	0.27	0.11	0.83
46g per m2	m2	0.03	0.45	0.28	0.11	0.84
48g per m2	m2	0.03	0.45	0.30	0.11	0.86
50g per m2	m2	0.03	0.45	0.31	0.11	0.87

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Lawn treatment by hand by hand						
Apply lawn treatment						
bonemeal	m2	0.02	0.30	0.03	0.05	0.38
fish, blood and stone	m2	0.02	0.30	0.03	0.05	0.38
autumn/winter feed	m2	0.02	0.30	0.04	0.05	0.39
spring/summer feed	m2	0.02	0.30	0.04	0.05	0.39
weed and moss killer	m2	0.02	0.30	0.05	0.05	0.40
Turfing by hand						
Lay imported turf on prepared bed						
meadow turf	m2	0.08	1.20	1.22	0.36	2.78
sports outfields	m2	0.09	1.35	1.82	0.48	3.65
domestic lawns	m2	0.10	1.50	2.09	0.54	4.13

	Unit	Plant £	Mat'ls £	O & P £	Total £
Grass seeding by machine					
Where applicable the plant column includes the cost of the operator.					
Sow grass seed on prepared ground					
PC £60.00 per 25kg					
10g per m2	m2	0.01	0.03	0.01	0.05
12g per m2	m2	0.01	0.03	0.01	0.05
14g per m2	m2	0.01	0.04	0.01	0.06
16g per m2	m2	0.01	0.04	0.01	0.06
18g per m2	m2	0.01	0.04	0.01	0.06
20g per m2	m2	0.01	0.05	0.01	0.07
22g per m2	m2	0.01	0.05	0.01	0.07
24g per m2	m2	0.01	0.05	0.01	0.07
26g per m2	m2	0.01	0.06	0.01	0.08
28g per m2	m2	0.01	0.06	0.01	0.08
30g per m2	m2	0.01	0.07	0.01	0.09
32g per m2	m2	0.01	0.07	0.01	0.09
34g per m2	m2	0.01	0.07	0.01	0.09
36g per m2	m2	0.01	0.08	0.01	0.10
38g per m2	m2	0.01	0.08	0.01	0.10
40g per m2	m2	0.01	0.09	0.02	0.12
42g per m2	m2	0.01	0.09	0.02	0.12
44g per m2	m2	0.01	0.09	0.02	0.12
46g per m2	m2	0.01	0.10	0.02	0.13
48g per m2	m2	0.01	0.10	0.02	0.13
50g per m2	m2	0.01	0.10	0.02	0.13
PC £70.00 per 25kg					
10g per m2	m2	0.01	0.04	0.01	0.06
12g per m2	m2	0.01	0.04	0.01	0.06
14g per m2	m2	0.01	0.05	0.01	0.07

	Unit	Plant £	Mat'ls £	O & P £	Total £
Grass seeding by machine (cont'd)					
16g per m2	m2	0.01	0.05	0.01	0.07
18g per m2	m2	0.01	0.06	0.01	0.08
20g per m2	m2	0.01	0.07	0.01	0.09
22g per m2	m2	0.01	0.07	0.01	0.09
24g per m2	m2	0.01	0.08	0.01	0.10
26g per m2	m2	0.01	0.09	0.02	0.12
28g per m2	m2	0.01	0.09	0.02	0.12
30g per m2	m2	0.01	0.10	0.02	0.13
32g per m2	m2	0.01	0.10	0.02	0.13
34g per m2	m2	0.01	0.11	0.02	0.14
36g per m2	m2	0.01	0.12	0.02	0.15
38g per m2	m2	0.01	0.12	0.02	0.15
40g per m2	m2	0.01	0.13	0.02	0.16
42g per m2	m2	0.01	0.13	0.02	0.16
44g per m2	m2	0.01	0.14	0.02	0.17
46g per m2	m2	0.01	0.14	0.02	0.17
48g per m2	m2	0.01	0.15	0.02	0.18
50g per m2	m2	0.01	0.16	0.03	0.20
PC £80.00 per 25kg					
10g per m2	m2	0.01	0.04	0.01	0.06
12g per m2	m2	0.01	0.04	0.01	0.06
14g per m2	m2	0.01	0.05	0.01	0.07
16g per m2	m2	0.01	0.05	0.01	0.07
18g per m2	m2	0.01	0.06	0.01	0.08
20g per m2	m2	0.01	0.07	0.01	0.09
22g per m2	m2	0.01	0.07	0.01	0.09
24g per m2	m2	0.01	0.08	0.01	0.10
26g per m2	m2	0.01	0.09	0.02	0.12
28g per m2	m2	0.01	0.09	0.02	0.12
30g per m2	m2	0.01	0.10	0.02	0.13
32g per m2	m2	0.01	0.10	0.02	0.13
34g per m2	m2	0.01	0.11	0.02	0.14

	Unit	Plant £	Mat'ls £	O & P £	Total £
36g per m2	m2	0.01	0.12	0.02	0.15
38g per m2	m2	0.01	0.12	0.02	0.15
40g per m2	m2	0.01	0.13	0.02	0.16
42g per m2	m2	0.01	0.13	0.02	0.16
44g per m2	m2	0.01	0.14	0.02	0.17
46g per m2	m2	0.01	0.14	0.02	0.17
48g per m2	m2	0.01	0.15	0.02	0.18
50g per m2	m2	0.01	0.16	0.03	0.20
PC £90.00 per 25kg					
10g per m2	m2	0.01	0.04	0.01	0.06
12g per m2	m2	0.01	0.04	0.01	0.06
14g per m2	m2	0.01	0.05	0.01	0.07
16g per m2	m2	0.01	0.05	0.01	0.07
18g per m2	m2	0.01	0.06	0.01	0.08
20g per m2	m2	0.01	0.07	0.01	0.09
22g per m2	m2	0.01	0.07	0.01	0.09
24g per m2	m2	0.01	0.08	0.01	0.10
26g per m2	m2	0.01	0.09	0.02	0.12
28g per m2	m2	0.01	0.09	0.02	0.12
30g per m2	m2	0.01	0.10	0.02	0.13
32g per m2	m2	0.01	0.10	0.02	0.13
34g per m2	m2	0.01	0.11	0.02	0.14
36g per m2	m2	0.01	0.12	0.02	0.15
38g per m2	m2	0.01	0.12	0.02	0.15
40g per m2	m2	0.01	0.13	0.02	0.16
42g per m2	m2	0.01	0.13	0.02	0.16
44g per m2	m2	0.01	0.14	0.02	0.17
46g per m2	m2	0.01	0.14	0.02	0.17
48g per m2	m2	0.01	0.15	0.02	0.18
50g per m2	m2	0.01	0.16	0.03	0.20

	Unit	Plant £	Mat'ls £	O & P £	Total £
Grass seeding by machine (cont'd)					
PC £100.00 per 25kg					
10g per m2	m2	0.01	0.05	0.01	0.07
12g per m2	m2	0.01	0.06	0.01	0.08
14g per m2	m2	0.01	0.07	0.01	0.09
16g per m2	m2	0.01	0.07	0.01	0.09
18g per m2	m2	0.01	0.08	0.01	0.10
20g per m2	m2	0.01	0.09	0.02	0.12
22g per m2	m2	0.01	0.10	0.02	0.13
24g per m2	m2	0.01	0.11	0.02	0.14
26g per m2	m2	0.01	0.11	0.02	0.14
28g per m2	m2	0.01	0.12	0.02	0.15
30g per m2	m2	0.01	0.13	0.02	0.16
32g per m2	m2	0.01	0.14	0.02	0.17
34g per m2	m2	0.01	0.14	0.02	0.17
36g per m2	m2	0.01	0.15	0.02	0.18
38g per m2	m2	0.01	0.16	0.03	0.20
40g per m2	m2	0.01	0.17	0.03	0.21
42g per m2	m2	0.01	0.18	0.03	0.22
44g per m2	m2	0.01	0.18	0.03	0.22
46g per m2	m2	0.01	0.19	0.03	0.23
48g per m2	m2	0.01	0.20	0.03	0.24
50g per m2	m2	0.01	0.21	0.03	0.25
PC £110.00 per 25kg					
10g per m2	m2	0.01	0.05	0.01	0.07
12g per m2	m2	0.01	0.06	0.01	0.08
14g per m2	m2	0.01	0.07	0.01	0.09
16g per m2	m2	0.01	0.07	0.01	0.09
18g per m2	m2	0.01	0.08	0.01	0.10
20g per m2	m2	0.01	0.09	0.02	0.12
22g per m2	m2	0.01	0.10	0.02	0.13
24g per m2	m2	0.01	0.11	0.02	0.14
26g per m2	m2	0.01	0.11	0.02	0.14

	Unit	Plant £	Mat'ls £	O & P £	Total £
28g per m2	m2	0.01	0.12	0.02	0.15
30g per m2	m2	0.01	0.13	0.02	0.16
32g per m2	m2	0.01	0.14	0.02	0.17
34g per m2	m2	0.01	0.14	0.02	0.17
36g per m2	m2	0.01	0.15	0.02	0.18
38g per m2	m2	0.01	0.16	0.03	0.20
40g per m2	m2	0.01	0.17	0.03	0.21
42g per m2	m2	0.01	0.18	0.03	0.22
44g per m2	m2	0.01	0.18	0.03	0.22
46g per m2	m2	0.01	0.19	0.03	0.23
48g per m2	m2	0.01	0.20	0.03	0.24
50g per m2	m2	0.01	0.21	0.03	0.25
PC £120.00 per 25kg					
10g per m2	m2	0.01	0.06	0.01	0.08
12g per m2	m2	0.01	0.07	0.01	0.09
14g per m2	m2	0.01	0.08	0.01	0.10
16g per m2	m2	0.01	0.09	0.02	0.12
18g per m2	m2	0.01	0.10	0.02	0.13
20g per m2	m2	0.01	0.11	0.02	0.14
22g per m2	m2	0.01	0.12	0.02	0.15
24g per m2	m2	0.01	0.13	0.02	0.16
26g per m2	m2	0.01	0.14	0.02	0.17
28g per m2	m2	0.01	0.15	0.02	0.18
30g per m2	m2	0.01	0.16	0.03	0.20
32g per m2	m2	0.01	0.17	0.03	0.21
34g per m2	m2	0.01	0.18	0.03	0.22
36g per m2	m2	0.01	0.19	0.03	0.23
38g per m2	m2	0.01	0.20	0.03	0.24
40g per m2	m2	0.01	0.21	0.03	0.25
42g per m2	m2	0.01	0.22	0.03	0.26
44g per m2	m2	0.01	0.23	0.04	0.28
46g per m2	m2	0.01	0.24	0.04	0.29
48g per m2	m2	0.01	0.25	0.04	0.30
50g per m2	m2	0.01	0.26	0.04	0.31

	Unit	Plant £	Mat'ls £	O & P £	Total £
Grass seeding by machine (cont'd)					
PC £130.00 per 25kg					
10g per m2	m2	0.01	0.06	0.01	0.08
12g per m2	m2	0.01	0.07	0.01	0.09
14g per m2	m2	0.01	0.08	0.01	0.10
16g per m2	m2	0.01	0.09	0.02	0.12
18g per m2	m2	0.01	0.10	0.02	0.13
20g per m2	m2	0.01	0.11	0.02	0.14
22g per m2	m2	0.01	0.12	0.02	0.15
24g per m2	m2	0.01	0.13	0.02	0.16
26g per m2	m2	0.01	0.14	0.02	0.17
28g per m2	m2	0.01	0.15	0.02	0.18
30g per m2	m2	0.01	0.16	0.03	0.20
32g per m2	m2	0.01	0.17	0.03	0.21
34g per m2	m2	0.01	0.18	0.03	0.22
36g per m2	m2	0.01	0.19	0.03	0.23
38g per m2	m2	0.01	0.20	0.03	0.24
40g per m2	m2	0.01	0.21	0.03	0.25
42g per m2	m2	0.01	0.22	0.03	0.26
44g per m2	m2	0.01	0.23	0.04	0.28
46g per m2	m2	0.01	0.24	0.04	0.29
48g per m2	m2	0.01	0.25	0.04	0.30
50g per m2	m2	0.01	0.26	0.04	0.31
PC £140.00 per 25kg					
10g per m2	m2	0.01	0.06	0.01	0.08
12g per m2	m2	0.01	0.07	0.01	0.09
14g per m2	m2	0.01	0.08	0.01	0.10
16g per m2	m2	0.01	0.09	0.02	0.12
18g per m2	m2	0.01	0.10	0.02	0.13
20g per m2	m2	0.01	0.11	0.02	0.14
22g per m2	m2	0.01	0.12	0.02	0.15
24g per m2	m2	0.01	0.13	0.02	0.16
26g per m2	m2	0.01	0.14	0.02	0.17

	Unit	Plant £	Mat'ls £	O & P £	Total £
28g per m2	m2	0.01	0.15	0.02	0.18
30g per m2	m2	0.01	0.16	0.03	0.20
32g per m2	m2	0.01	0.17	0.03	0.21
34g per m2	m2	0.01	0.18	0.03	0.22
36g per m2	m2	0.01	0.19	0.03	0.23
38g per m2	m2	0.01	0.20	0.03	0.24
40g per m2	m2	0.01	0.21	0.03	0.25
42g per m2	m2	0.01	0.22	0.03	0.26
44g per m2	m2	0.01	0.23	0.04	0.28
46g per m2	m2	0.01	0.24	0.04	0.29
48g per m2	m2	0.01	0.25	0.04	0.30
50g per m2	m2	0.01	0.26	0.04	0.31
PC £150.00 per 25kg					
10g per m2	m2	0.01	0.07	0.01	0.09
12g per m2	m2	0.01	0.08	0.01	0.10
14g per m2	m2	0.01	0.09	0.02	0.12
16g per m2	m2	0.01	0.11	0.02	0.14
18g per m2	m2	0.01	0.12	0.02	0.15
20g per m2	m2	0.01	0.13	0.02	0.16
22g per m2	m2	0.01	0.14	0.02	0.17
24g per m2	m2	0.01	0.15	0.02	0.18
26g per m2	m2	0.01	0.16	0.03	0.20
28g per m2	m2	0.01	0.17	0.03	0.21
30g per m2	m2	0.01	0.18	0.03	0.22
32g per m2	m2	0.01	0.19	0.03	0.23
34g per m2	m2	0.01	0.21	0.03	0.25
36g per m2	m2	0.01	0.22	0.03	0.26
38g per m2	m2	0.01	0.23	0.04	0.28
40g per m2	m2	0.01	0.25	0.04	0.30
42g per m2	m2	0.01	0.26	0.04	0.31
44g per m2	m2	0.01	0.27	0.04	0.32
46g per m2	m2	0.01	0.28	0.04	0.33
48g per m2	m2	0.01	0.30	0.05	0.36
50g per m2	m2	0.01	0.31	0.05	0.37

	Unit	Plant £	Mat'ls £	O & P £	Total £
Grass seeding by machine (cont'd)					
PC £160.00 per 25kg					
10g per m2	m2	0.01	0.07	0.01	0.09
12g per m2	m2	0.01	0.08	0.01	0.10
14g per m2	m2	0.01	0.09	0.02	0.12
16g per m2	m2	0.01	0.11	0.02	0.14
18g per m2	m2	0.01	0.12	0.02	0.15
20g per m2	m2	0.01	0.13	0.02	0.16
22g per m2	m2	0.01	0.14	0.02	0.17
24g per m2	m2	0.01	0.15	0.02	0.18
26g per m2	m2	0.01	0.16	0.03	0.20
28g per m2	m2	0.01	0.17	0.03	0.21
30g per m2	m2	0.01	0.18	0.03	0.22
32g per m2	m2	0.01	0.19	0.03	0.23
34g per m2	m2	0.01	0.21	0.03	0.25
36g per m2	m2	0.01	0.22	0.03	0.26
38g per m2	m2	0.01	0.23	0.04	0.28
40g per m2	m2	0.01	0.25	0.04	0.30
42g per m2	m2	0.01	0.26	0.04	0.31
44g per m2	m2	0.01	0.27	0.04	0.32
46g per m2	m2	0.01	0.28	0.04	0.33
48g per m2	m2	0.01	0.30	0.05	0.36
50g per m2	m2	0.01	0.31	0.05	0.37
Lawn treatment by machine by hand					
Apply lawn treatment					
bonemeal	m2	0.01	0.03	0.01	0.05
fish, blood and stone	m2	0.01	0.03	0.01	0.05
autumn and winter feed	m2	0.01	0.04	0.01	0.06
spring and summer feed	m2	0.01	0.04	0.01	0.06
weed and moss killer	m2	0.01	0.05	0.01	0.07

Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
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BARE ROOT TREES

The following descriptions refer to dimensions and sizes of trees as as set out below.

Whips: 125 to 175cm high
 Feathered: 175 to 250cm high
 Light standard: 6 to 8cm girth
 Standard: 8 to 10cm girth
 Selected standard: 10 to 12cm girth
 Heavy standard: 12 to 14cm girth
 Extra heavy standard: 14 to 16cm girth

**Excavate tree pit, fork
 bottom, plant tree,
 backfill with
 excavated material
 including organic manure
 (30% of soil by volume),
 water and surround with
 peat**

Acer (Maple)

campestre						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.42	4.86	37.28
standard	nr	1.20	18.00	19.92	5.69	43.61
selected standard	nr	1.40	21.00	34.20	8.28	63.48
heavy standard	nr	1.60	24.00	56.01	12.00	92.01
extra heavy standard	nr	2.00	30.00	68.42	14.76	113.18
rubrum						
whip	nr	0.30	4.50	5.90	1.56	11.96
feathered	nr	0.40	6.00	12.45	2.77	21.22

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Tree planting (cont'd)						
light standard	nr	1.00	15.00	24.25	5.89	45.14
standard	nr	1.20	18.00	34.21	7.83	60.04
selected standard	nr	1.40	21.00	56.02	11.55	88.57
heavy standard	nr	1.60	24.00	68.47	13.87	106.34
extra heavy standard	nr	2.00	30.00	80.91	16.64	127.55
<i>davidii</i>						
light standard	nr	1.00	15.00	37.35	7.85	60.20
standard	nr	1.20	18.00	49.79	10.17	77.96
selected standard	nr	1.40	21.00	68.20	13.38	102.58
heavy standard	nr	1.60	24.00	99.59	18.54	142.13
extra heavy standard	nr	2.00	30.00	143.16	25.97	199.13
<i>platanoides</i>						
whip	nr	0.30	4.50	2.16	1.00	7.66
feathered	nr	0.40	6.00	5.63	1.74	13.37
light standard	nr	1.00	15.00	11.53	3.98	30.51
standard	nr	1.20	18.00	14.02	4.80	36.82
selected standard	nr	1.40	21.00	20.24	6.19	47.43
heavy standard	nr	1.60	24.00	29.88	8.08	61.96
extra heavy standard	nr	2.00	30.00	68.47	14.77	113.24
<i>Aesculus (Chestnut)</i>						
<i>hippocastanum</i>						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.43	4.86	37.29
standard	nr	1.20	18.00	19.92	5.69	43.61
selected standard	nr	1.40	21.00	34.21	8.28	63.49
heavy standard	nr	1.60	24.00	56.02	12.00	92.02
extra heavy standard	nr	2.00	30.00	68.20	14.73	112.93

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
h. baumanii						
light standard	nr	1.00	15.00	37.34	7.85	60.19
standard	nr	1.20	18.00	49.79	10.17	77.96
selected standard	nr	1.40	21.00	68.47	13.42	102.89
heavy standard	nr	1.60	24.00	99.59	18.54	142.13
extra heavy standard	nr	2.00	30.00	143.16	25.97	199.13
Alnus (Alder)						
glutinosa						
whip	nr	0.30	4.50	2.81	1.10	8.41
feathered	nr	0.40	6.00	6.82	1.92	14.74
light standard	nr	1.00	15.00	14.61	4.44	34.05
standard	nr	1.20	18.00	16.83	5.22	40.05
selected standard	nr	1.40	21.00	27.39	7.26	55.65
heavy standard	nr	1.60	24.00	49.79	11.07	84.86
extra heavy standard	nr	2.00	30.00	62.24	13.84	106.08
g. laciniata						
light standard	nr	1.00	15.00	37.34	7.85	60.19
standard	nr	1.20	18.00	49.79	10.17	77.96
selected standard	nr	1.40	21.00	68.47	13.42	102.89
heavy standard	nr	1.60	24.00	99.59	18.54	142.13
extra heavy standard	nr	2.00	30.00	143.16	25.97	199.13
Betula (Birch)						
albosinensis						
light standard	nr	1.00	15.00	37.34	7.85	60.19
standard	nr	1.20	18.00	49.79	10.17	77.96
selected standard	nr	1.40	21.00	68.47	13.42	102.89
heavy standard	nr	1.60	24.00	99.59	18.54	142.13
extra heavy standard	nr	2.00	30.00	143.16	25.97	199.13

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Tree planting (cont'd)						
ermanii						
light standard	nr	1.00	15.00	37.34	7.85	60.19
standard	nr	1.20	18.00	49.79	10.17	77.96
selected standard	nr	1.40	21.00	68.47	13.42	102.89
heavy standard	nr	1.60	24.00	99.59	18.54	142.13
extra heavy standard	nr	2.00	30.00	143.16	25.97	199.13
pendula						
whip	nr	0.30	4.50	2.16	1.00	7.66
feathered	nr	0.40	6.00	5.62	1.74	13.36
light standard	nr	1.00	15.00	11.53	3.98	30.51
standard	nr	1.20	18.00	14.02	4.80	36.82
selected standard	nr	1.40	21.00	20.24	6.19	47.43
heavy standard	nr	1.60	24.00	29.88	8.08	61.96
extra heavy standard	nr	2.00	30.00	68.47	14.77	113.24
p. youngii						
light standard	nr	1.00	15.00	37.34	7.85	60.19
standard	nr	1.20	18.00	49.79	10.17	77.96
selected standard	nr	1.40	21.00	68.47	13.42	102.89
heavy standard	nr	1.60	24.00	99.59	18.54	142.13
extra heavy standard	nr	2.00	30.00	143.16	25.97	199.13
Fagus (Beech)						
sylvatica						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.43	4.86	37.29
standard	nr	1.20	18.00	19.92	5.69	43.61
selected standard	nr	1.40	21.00	34.21	8.28	63.49
heavy standard	nr	1.60	24.00	56.02	12.00	92.02
extra heavy standard	nr	2.00	30.00	68.46	14.77	113.23

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
s. Dawyck purple						
light standard	nr	1.00	15.00	37.34	7.85	60.19
standard	nr	1.20	18.00	49.79	10.17	77.96
selected standard	nr	1.40	21.00	68.47	13.42	102.89
heavy standard	nr	1.60	24.00	99.59	18.54	142.13
extra heavy standard	nr	2.00	30.00	143.16	25.97	199.13
Fraxinus (Ash)						
angustifolia Raywood						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.43	4.86	37.29
standard	nr	1.20	18.00	19.92	5.69	43.61
selected standard	nr	1.40	21.00	34.21	8.28	63.49
heavy standard	nr	1.60	24.00	56.02	12.00	92.02
extra heavy standard	nr	2.00	30.00	68.46	14.77	113.23
jaspidea						
whip	nr	0.30	4.50	5.90	1.56	11.96
feathered	nr	0.40	6.00	12.45	2.77	21.22
light standard	nr	1.00	15.00	24.24	5.89	45.13
standard	nr	1.20	18.00	34.21	7.83	60.04
selected standard	nr	1.40	21.00	56.01	11.55	88.56
heavy standard	nr	1.60	24.00	68.47	13.87	106.34
extra heavy standard	nr	2.00	30.00	80.91	16.64	127.55
pendula						
whip	nr	0.30	4.50	5.90	1.56	11.96
feathered	nr	0.40	6.00	12.45	2.77	21.22
light standard	nr	1.00	15.00	24.24	5.89	45.13
standard	nr	1.20	18.00	34.21	7.83	60.04
selected standard	nr	1.40	21.00	56.01	11.55	88.56
heavy standard	nr	1.60	24.00	68.47	13.87	106.34
extra heavy standard	nr	2.00	30.00	80.91	16.64	127.55

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Tree planting (cont'd)						
Prunus (Cherry)						
avium						
whip	nr	0.30	4.50	2.16	1.00	7.66
feathered	nr	0.40	6.00	5.62	1.74	13.36
light standard	nr	1.00	15.00	11.53	3.98	30.51
standard	nr	1.20	18.00	14.02	4.80	36.82
selected standard	nr	1.40	21.00	20.24	6.19	47.43
heavy standard	nr	1.60	24.00	29.88	8.08	61.96
extra heavy standard	nr	2.00	30.00	68.47	14.77	113.24
dulcis						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.43	4.86	37.29
standard	nr	1.20	18.00	19.92	5.69	43.61
selected standard	nr	1.40	21.00	34.21	8.28	63.49
heavy standard	nr	1.60	24.00	56.02	12.00	92.02
extra heavy standard	nr	2.00	30.00	68.46	14.77	113.23
royal burgundy						
whip	nr	0.30	4.50	5.90	1.56	11.96
feathered	nr	0.40	6.00	12.45	2.77	21.22
light standard	nr	1.00	15.00	24.24	5.89	45.13
standard	nr	1.20	18.00	34.21	7.83	60.04
selected standard	nr	1.40	21.00	56.01	11.55	88.56
heavy standard	nr	1.60	24.00	68.47	13.87	106.34
extra heavy standard	nr	2.00	30.00	80.91	16.64	127.55
taihaku						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.43	4.86	37.29
standard	nr	1.20	18.00	19.92	5.69	43.61

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
selected standard	nr	1.40	21.00	34.21	8.28	63.49
heavy standard	nr	1.60	24.00	56.02	12.00	92.02
extra heavy standard	nr	2.00	30.00	68.46	14.77	113.23
Quercus (Oak)						
ceris						
whip	nr	0.30	4.50	5.90	1.56	11.96
feathered	nr	0.40	6.00	12.45	2.77	21.22
light standard	nr	1.00	15.00	24.24	5.89	45.13
standard	nr	1.20	18.00	34.21	7.83	60.04
selected standard	nr	1.40	21.00	56.01	11.55	88.56
heavy standard	nr	1.60	24.00	68.47	13.87	106.34
extra heavy standard	nr	2.00	30.00	80.91	16.64	127.55
robur						
whip	nr	0.30	4.50	2.81	1.10	8.41
feathered	nr	0.40	6.00	6.82	1.92	14.74
light standard	nr	1.00	15.00	14.61	4.44	34.05
standard	nr	1.20	18.00	16.83	5.22	40.05
selected standard	nr	1.40	21.00	27.39	7.26	55.65
heavy standard	nr	1.60	24.00	49.79	11.07	84.86
extra heavy standard	nr	2.00	30.00	62.24	13.84	106.08
rubra						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.43	4.86	37.29
standard	nr	1.20	18.00	19.92	5.69	43.61
selected standard	nr	1.40	21.00	34.21	8.28	63.49
heavy standard	nr	1.60	24.00	56.02	12.00	92.02
extra heavy standard	nr	2.00	30.00	68.46	14.77	113.23

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Tree planting (cont'd)						
Sorbus (Whitebeam)						
aria						
whip	nr	0.30	4.50	2.81	1.10	8.41
feathered	nr	0.40	6.00	6.82	1.92	14.74
light standard	nr	1.00	15.00	14.61	4.44	34.05
standard	nr	1.20	18.00	16.83	5.22	40.05
selected standard	nr	1.40	21.00	27.39	7.26	55.65
heavy standard	nr	1.60	24.00	49.79	11.07	84.86
extra heavy standard	nr	2.00	30.00	62.24	13.84	106.08
aucuparia						
whip	nr	0.30	4.50	2.16	1.00	7.66
feathered	nr	0.40	6.00	5.62	1.74	13.36
light standard	nr	1.00	15.00	11.53	3.98	30.51
standard	nr	1.20	18.00	14.02	4.80	36.82
selected standard	nr	1.40	21.00	20.24	6.19	47.43
heavy standard	nr	1.60	24.00	29.88	8.08	61.96
extra heavy standard	nr	2.00	30.00	68.47	14.77	113.24
hupehensis						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.43	4.86	37.29
standard	nr	1.20	18.00	19.92	5.69	43.61
selected standard	nr	1.40	21.00	34.21	8.28	63.49
heavy standard	nr	1.60	24.00	56.02	12.00	92.02
extra heavy standard	nr	2.00	30.00	68.46	14.77	113.23
sargentiana						
whip	nr	0.30	4.50	5.90	1.56	11.96
feathered	nr	0.40	6.00	12.45	2.77	21.22
light standard	nr	1.00	15.00	24.24	5.89	45.13
standard	nr	1.20	18.00	34.21	7.83	60.04

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
selected standard	nr	1.40	21.00	56.01	11.55	88.56
heavy standard	nr	1.60	24.00	68.47	13.87	106.34
extra heavy standard	nr	2.00	30.00	80.91	16.64	127.55
terminalis						
whip	nr	0.30	4.50	5.90	1.56	11.96
feathered	nr	0.40	6.00	12.45	2.77	21.22
light standard	nr	1.00	15.00	24.24	5.89	45.13
standard	nr	1.20	18.00	34.21	7.83	60.04
selected standard	nr	1.40	21.00	56.01	11.55	88.56
heavy standard	nr	1.60	24.00	68.47	13.87	106.34
extra heavy standard	nr	2.00	30.00	80.91	16.64	127.55
Tilia (Lime)						
cordata						
whip	nr	0.30	4.50	2.81	1.10	8.41
feathered	nr	0.40	6.00	6.82	1.92	14.74
light standard	nr	1.00	15.00	14.61	4.44	34.05
standard	nr	1.20	18.00	16.83	5.22	40.05
selected standard	nr	1.40	21.00	27.39	7.26	55.65
heavy standard	nr	1.60	24.00	49.79	11.07	84.86
extra heavy standard	nr	2.00	30.00	62.24	13.84	106.08
petiolaris						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.43	4.86	37.29
standard	nr	1.20	18.00	19.92	5.69	43.61
selected standard	nr	1.40	21.00	34.21	8.28	63.49
heavy standard	nr	1.60	24.00	56.02	12.00	92.02
extra heavy standard	nr	2.00	30.00	68.46	14.77	113.23

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Tree planting (cont'd)						
p. rubra						
whip	nr	0.30	4.50	4.06	1.28	9.84
feathered	nr	0.40	6.00	8.71	2.21	16.92
light standard	nr	1.00	15.00	17.43	4.86	37.29
standard	nr	1.20	18.00	19.92	5.69	43.61
selected standard	nr	1.40	21.00	34.21	8.28	63.49
heavy standard	nr	1.60	24.00	56.02	12.00	92.02
extra heavy standard	nr	2.00	30.00	68.46	14.77	113.23

CONTAINER GROWN TREES

**Excavate tree pit, fork
bottom, plant tree,
backfill with
excavated material
including organic manure
(30% of soil by volume),
water and surround with
peat**

Acer (Maple)

campestre carnival, size 6-8cm, pot 25 litre	nr	1.00	15.00	34.92	7.49	57.41
c. Postelense, size 6-8cm, pot 25 litre	nr	1.00	15.00	34.92	7.49	57.41
negundo elegans, size 6-8cm pot 25 litre	nr	1.00	15.00	32.43	7.11	54.54
p. Deborah, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
p. Deborah, size 10-12cm, pot 45 litre	nr	1.40	21.00	69.85	13.63	104.48

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
p. Drummondii, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
p. Drummondii, size 10-12cm, pot 45 litre	nr	1.40	21.00	69.85	13.63	104.48
Aesculus (Chestnut)						
x carnea Briotii, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
x carnea Briotii, size 10-12cm, pot 45 litre	nr	1.40	21.00	69.85	13.63	104.48
Alnus						
incarna Aurea, size 6-8cm, pot 25 litre	nr	1.00	15.00	32.43	7.11	54.54
incarna Aurea, size 10-12cm, pot 45 litre	nr	1.40	21.00	89.80	16.62	127.42
Betula (Birch)						
albosinensis China Ruby size 6-8cm, pot 25 litre	nr	1.00	15.00	34.92	7.49	57.41
nigra, size 10-12cm, pot 45 litre	nr	1.40	21.00	85.46	15.97	122.43
pendula, size 6-8cm, pot 25 litre	nr	1.00	15.00	23.70	5.81	44.51
pendula, size 10-12cm, pot 45 litre	nr	1.40	21.00	66.10	13.07	100.17
Laciniata, size 6-8cm, pot 25 litre	nr	1.00	15.00	34.92	7.49	57.41
Laciniata, size 10-12cm, pot 45 litre	nr	1.40	21.00	86.06	16.06	123.12

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Tree planting (cont'd)						
p. Youngii, size 6-8cm, pot 25 litre	nr	1.00	15.00	34.92	7.49	57.41
p. Youngii, size 10-12cm, pot 45 litre	nr	1.40	21.00	84.81	15.87	121.68
utilis var. jacquemontii Doorenbos, size 6-8cm, pot 25 litre	nr	1.00	15.00	34.92	7.49	57.41
utilis var. jacquemontii Doorenbos, size 10-12cm, pot 45 litre	nr	1.40	21.00	84.81	15.87	121.68
Fagus (Beech)						
sylvatica, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
sylvatica, size 10-12cm, pot 45 litre	nr	1.40	21.00	110.00	19.65	150.65
s. Altrapurpurea, size 6-8cm, pot 25 litre	nr	1.00	15.00	34.92	7.49	57.41
s. Altrapurpurea, size 10-12cm, pot 45 litre	nr	1.40	21.00	110.00	19.65	150.65
Fraxinus (Ash)						
Augustifolia Raywood, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
Augustifolia Raywood, size 10-12cm, pot 45 litre	nr	1.40	21.00	67.35	13.25	101.60
excelsior Jaspidea, size 6-8cm, pot 25 litre	nr	1.00	15.00	34.92	7.49	57.41
excelsior Jaspidea, size 10-12cm, pot 45 litre	nr	1.40	21.00	77.33	14.75	113.08

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Prunus (Cherry)						
Accolade, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
avium Plena, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
avium Plena, size 10-12cm, pot 45 litre	nr	1.40	21.00	67.35	13.25	101.60
Fragrant Cloud, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
Kanzan, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
Kanzan, size 10-12cm, pot 45 litre	nr	1.40	21.00	67.35	13.25	101.60
Pandora, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
Royal Burgundy, size 6-8cm, pot 25 litre	nr	1.00	15.00	34.92	7.49	57.41
sargentii, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
serrula, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
x s. Autumnalis Rosea, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
x s. Pendula Rubra, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
Umineko, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
Umineko, size 10-12cm, pot 45 litre	nr	1.40	21.00	29.93	7.64	58.57
x yeodensis, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
x y Shidare-yoshino, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Tree planting (cont'd)						
<i>Quercus</i> (Oak)						
ilex, size 6-8cm, pot 25 litre	nr	1.00	15.00	34.97	7.50	57.47
ilex, size 10-12cm, pot 45 litre	nr	1.40	21.00	78.57	14.94	114.51
robur f. fastigiata, size 10-12cm, pot 45 litre	nr	1.40	21.00	112.74	20.06	153.80
<i>Sorbus</i> (Whitebeam)						
aria Lutescens, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
aria Lutescens, size 10-12cm, pot 45 litre	nr	1.40	21.00	67.35	13.25	101.60
majestica, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
majestica, size 10-12cm, pot 45 litre	nr	1.40	21.00	67.35	13.25	101.60
a. var. xanthocarpa, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
commixta Embley, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
hupehensis, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
hupehensis, size 10-12cm, pot 45 litre	nr	1.40	21.00	77.33	14.75	113.08
Leonard Messel, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
sargentiana, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67
Sunshine, size 6-8cm, pot 25 litre	nr	1.00	15.00	29.93	6.74	51.67

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
CONIFERS						
Excavate tree pit, fork bottom, plant conifer, backfill with excavated material including organic manure (30% of soil by volume), water and surround with peat						
Abies (Fir)						
concolor, height 60cm, pot 3 litre	nr	0.30	4.50	4.72	1.38	10.60
Cedrus (Cedar)						
atlantica, height 175cm, pot 35 litre	nr	1.00	15.00	68.60	12.54	96.14
atlantica, height 200cm, pot 50 litre	nr	1.00	15.00	99.78	17.22	132.00
atlantica, height 250cm, pot 75 litre	nr	1.00	15.00	149.67	24.70	189.37
deodara, height 175cm, pot 30 litre	nr	1.00	15.00	56.13	10.67	81.80
deodara, height 200cm, pot 35 litre	nr	1.00	15.00	81.07	14.41	110.48
deodara, height 250cm, pot 50 litre	nr	1.00	15.00	99.78	17.22	132.00
libani, height 175cm, pot 30 litre	nr	1.00	15.00	56.13	10.67	81.80
libani, height 200cm, pot 35 litre	nr	1.00	15.00	81.07	14.41	110.48
libani, height 250cm, pot 50 litre	nr	1.00	15.00	99.78	17.22	132.00

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Tree planting (cont'd)						
Chamaecyparis (Cypress)						
lawsoniana, height 80cm, pot 3 litre	nr	0.30	4.50	4.72	1.38	10.60
I. Ellwoodii, height 40cm, pot 2 litre	nr	0.30	4.50	4.72	1.38	10.60
I. Fletcherii, height 80cm, pot 3 litre	nr	0.30	4.50	4.72	1.38	10.60
I. stardust, height 80cm, pot 3 litre	nr	0.30	4.50	4.72	1.38	10.60
Cryptomeria (Cedar)						
japonica, height 60cm, pot 3 litre	nr	0.30	4.50	5.86	1.55	11.91
leylandii, height 80cm, pot 3 litre	nr	0.30	4.50	3.74	1.24	9.48
leylandii, height 100cm, pot 5 litre	nr	0.30	4.50	7.16	1.75	13.41
leylandii, height 125cm, pot 10 litre	nr	0.30	4.50	9.98	2.17	16.65
leylandii, height 150cm, pot 10 litre	nr	0.30	4.50	12.47	2.55	19.52
leylandii, height 175cm, pot 13 litre	nr	0.30	4.50	18.71	3.48	26.69
Cupressus (Cypress)						
macrocarpa Goldcrest, height 125cm, pot 10 litre	nr	0.30	4.50	29.93	5.16	39.59
macrocarpa Goldcrest, height 150cm, pot 15 litre	nr	0.30	4.50	49.86	8.15	62.51

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
macrocarpa Goldcrest, height 200cm, pot 25 litre	nr	0.30	4.50	74.83	11.90	91.23
macrocarpa Goldcrest, height 250cm, pot 30 litre	nr	0.30	4.50	99.78	15.64	119.92
Larix (Larch)						
decidua, height 80cm, pot 3 litre	nr	0.30	4.50	4.77	1.39	10.66
x eurolepis, height 80cm, pot 3 litre	nr	0.30	4.50	4.77	1.39	10.66
kaempferi, height 80cm, pot 3 litre	nr	0.30	4.50	4.77	1.39	10.66
Pinus (Pine)						
nigra subsp laricio, height 80cm, pot 3 litre	nr	0.30	4.50	4.33	1.32	10.15
nigra subsp laricio, height 100cm, pot 10 litre	nr	0.30	4.50	12.47	2.55	19.52
nigra subsp laricio, height 125cm, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
mugo, height 30cm, pot 2 litre	nr	0.30	4.50	5.64	1.52	11.66
mugo, height 50cm, pot 10 litre	nr	0.30	4.50	18.71	3.48	26.69

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	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Taxus (Yew)						
baccata, height 60cm, pot 3 litre	nr	0.30	4.50	5.64	1.52	11.66
baccata, height 80cm, pot 5 litre	nr	0.30	4.50	8.73	1.98	15.21
baccata, height 100cm, pot 10 litre	nr	0.30	4.50	18.71	3.48	26.69
baccata, height 125cm, pot 20 litre	nr	0.30	4.50	37.47	6.30	48.27

SHRUBS

The following descriptions refer to dimensions and sizes of shrubs as as set out below.

Dwarf: 20 to 60cm high
 Small: 60 to 120cm high
 Medium: 120 to 200cm high
 Large: over 200cm high

**Form planting hole in
 cultivated area, place
 shrub in hole, backfill,
 water and surround with
 peat**

Acer (Maple)

campestre, dwarf, pot 3 litre	nr	0.20	3.00	2.50	0.83	6.33
campestre, medium, pot 10 litre	nr	0.40	6.00	12.47	2.77	21.24
p. f. atropurpureum, dwarf, pot 3 litre	nr	0.20	3.00	13.72	2.51	19.23

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
p. f. atropurpureum, small, pot 10 litre	nr	0.30	4.50	31.18	5.35	41.03
p. Bloodgood, small, pot 3 litre	nr	0.30	4.50	13.72	2.73	20.95
Sango-kaku, dwarf, pot 3 litre	nr	0.20	3.00	13.72	2.51	19.23
Sango-kaku, small, pot 3 litre	nr	0.30	4.50	31.18	5.35	41.03
shirawanum, dwarf pot 3 litre	nr	0.20	3.00	13.72	2.51	19.23
Buddleja (Buddleia)						
davidii Black Knight, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
davidii Black Knight, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
d. Harlequin, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
d. Harlequin, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
d. Royal Red, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
d. Royal Red, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
d. White Profusion, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
d. White Profusion, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Pink Delight, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
Pink Delight, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Camellia (Camellia)						
japonica Adolphe Audusson, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
japonica Adolphe Audusson, small, pot 3 litre	nr	0.30	4.50	8.13	1.89	14.52
japonica Adolphe Audusson, medium, pot 10 litre	nr	0.40	6.00	17.46	3.52	26.98
j. Lady Vansittart, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
j. Lady Vansittart, small, pot 3 litre	nr	0.30	4.50	8.13	1.89	14.52
j. Lady Vansittart, medium, pot 10 litre	nr	0.40	6.00	17.46	3.52	26.98
Leonard Messel, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
Leonard Messel, small, pot 3 litre	nr	0.30	4.50	8.13	1.89	14.52
Leonard Messel, medium, pot 10 litre	nr	0.40	6.00	17.46	3.52	26.98
x w. Debbie, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
Leonard Messel, small, pot 3 litre	nr	0.30	4.50	8.13	1.89	14.52
Leonard Messel, medium, pot 10 litre	nr	0.40	6.00	17.46	3.52	26.98
Cytisus (Broom)						
battandieri, dwarf, pot 3 litre	nr	0.20	3.00	8.13	1.67	12.80
battandieri, small, pot 10 litre	nr	0.30	4.50	17.46	3.29	25.25

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
burkwoodii, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
burkwoodii, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Fulgens, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
Fulgens, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Goldfinch, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
Goldfinch, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Lena, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
Lena, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
x p. Allgold, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
x p. Allgold, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Zeelandia, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
Fagus (Beech)						
sylvatica, dwarf, pot 3 litre	nr	0.20	3.00	2.50	0.83	6.33
sylvatica, dwarf, pot 10 litre	nr	0.30	4.50	12.47	2.55	19.52
Hydrangea						
arborescens Annabelle, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
arborescens Annabelle, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Shrub planting (cont'd)						
a Villosa Group, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
a Villosa Group, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
m Mariesii Grandiflora, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
m Mariesii Grandiflora, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
m Mowe, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
m Mowe, dwarf, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Preziosa, dwarf, pot 3 litre	nr	0.20	3.00	4.33	1.10	8.43
Preziosa, dwarf, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
q. Snow Queen, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
q. Snow Queen, small, pot 10 litre	nr	0.30	4.50	19.38	3.58	27.46
s. Miranda, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
Lavandula (Lavender)						
augustifolia, dwarf, pot 2 litre	nr	0.20	3.00	2.49	0.82	6.31
a. Munstead, dwarf, pot 2 litre	nr	0.20	3.00	2.49	0.82	6.31
a. Twickel Purple, dwarf, pot 2 litre	nr	0.20	3.00	2.49	0.82	6.31
stoechas, dwarf, pot 2 litre	nr	0.20	3.00	2.49	0.82	6.31

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Ligustrum (Privet)						
japonicum, dwarf, pot 3 litre	nr	0.20	3.00	4.99	1.20	9.19
japonicum, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
ovalifolium, dwarf, pot 3 litre	nr	0.20	3.00	2.49	0.82	6.31
ovalifolium, small, pot 10 litre	nr	0.30	4.50	12.47	2.55	19.52
o. Aureum, dwarf, pot 3 litre	nr	0.20	3.00	3.74	1.01	7.75
o. Aureum, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
vulgare, dwarf, pot 3 litre	nr	0.20	3.00	2.49	0.82	6.31
vulgare, small, pot 10 litre	nr	0.30	4.50	12.47	2.55	19.52
Lonicera (Honeysuckle)						
fragrantissima, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
fragrantissima, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
nitida, dwarf, pot 3 litre	nr	0.20	3.00	2.49	0.82	6.31
nitida, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
n. Baggesen's Gold, dwarf, pot 3 litre	nr	0.20	3.00	3.74	1.01	7.75
n. Baggesen's Gold, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
pileata, dwarf, pot 3 litre	nr	0.20	3.00	2.49	0.82	6.31

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Shrub planting (cont'd)						
pileata, small, pot 10 litre	nr	0.20	3.00	2.49	0.82	6.31
syringantha, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
Magnolia						
x brooklynensis, dwarf, pot 3 litre	nr	0.20	3.00	11.22	2.13	16.35
g. Galisonniere, dwarf, pot 3 litre	nr	0.20	3.00	11.22	2.13	16.35
g. Galisonniere, small, pot 10 litre	nr	0.30	4.50	28.04	4.88	37.42
Heaven Scent, dwarf, pot 3 litre	nr	0.20	3.00	11.22	2.13	16.35
Heaven Scent, small, pot 10 litre	nr	0.30	4.50	28.04	4.88	37.42
liliflora Nigra, dwarf, pot 3 litre	nr	0.20	3.00	11.22	2.13	16.35
liliflora Nigra, small, pot 10 litre	nr	0.30	4.50	28.04	4.88	37.42
x soulangeana, dwarf, pot 3 litre	nr	0.20	3.00	11.22	2.13	16.35
x soulangeana, small, pot 10 litre	nr	0.30	4.50	28.04	4.88	37.42
stellata, dwarf, pot 3 litre	nr	0.20	3.00	11.22	2.13	16.35
stellata, small, pot 10 litre	nr	0.30	4.50	28.04	4.88	37.42
s. Royal Star, dwarf, pot 3 litre	nr	0.20	3.00	11.22	2.13	16.35
Sundance, dwarf, pot 3 litre	nr	0.20	3.00	11.22	2.13	16.35

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Prunus (Cherry)						
cerasifera Nigra, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
cerasifera Nigra, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
laurocerasus, dwarf, pot 3 litre	nr	0.20	3.00	2.49	0.82	6.31
laurocerasus, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
l. Cherry Brandy, dwarf, pot 3 litre	nr	0.20	3.00	4.99	1.20	9.19
l. Cherry Brandy, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
l. Mount Vernon, dwarf, pot 3 litre	nr	0.20	3.00	4.99	1.20	9.19
l. Mount Vernon, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
l. Schipkaensis, dwarf, pot 3 litre	nr	0.20	3.00	3.74	1.01	7.75
l. Schipkaensis, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
l. Zabeliana, dwarf, pot 3 litre	nr	0.20	3.00	3.74	1.01	7.75
l. Zabeliana, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
lusitanica, dwarf, pot 3 litre	nr	0.20	3.00	3.74	1.01	7.75
lusitanica, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
l. Variegata, dwarf, pot 3 litre	nr	0.20	3.00	3.74	1.01	7.75
l. Variegata, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Shrub planting (cont'd)						
spinosa, dwarf, pot 3 litre	nr	0.20	3.00	2.49	0.82	6.31
Pyracantha (Firethorn)						
Red column, dwarf, pot 2 litre	nr	0.20	3.00	3.15	0.92	7.07
Red column, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Mohave, dwarf, pot 2 litre	nr	0.20	3.00	3.15	0.92	7.07
Mohave, dwarf, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Orange Glow, dwarf, pot 2 litre	nr	0.20	3.00	3.58	0.99	7.57
Orange Glow, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Soleil d'Or, dwarf, pot 2 litre	nr	0.20	3.00	3.58	0.99	7.57
Soleil d'Or, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
Sparkler, dwarf, pot 2 litre	nr	0.20	3.00	3.15	0.92	7.07
Teton, dwarf, pot 2 litre	nr	0.20	3.00	3.15	0.92	7.07
Salix (Willow)						
hastata Wehrhahnii, dwarf, pot 3 litre	nr	0.20	3.00	6.24	1.39	10.63
hastata Wehrhahnii, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
helvetica, dwarf, pot 2 litre	nr	0.20	3.00	6.24	1.39	10.63

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
helvetica, small, pot 10 litre	nr	0.30	4.50	13.72	2.73	20.95
viminalis, dwarf, pot 3 litre	nr	0.20	3.00	2.49	0.82	6.31
viminalis, small, pot 10 litre	nr	0.30	4.50	12.47	2.55	19.52
Syringa (Lilac)						
meyeri var.spontanea Palibin, dwarf, pot 3 litre	nr	0.20	3.00	7.16	1.52	11.68
meyeri var.spontanea Palibin, small, pot 10 litre	nr	0.30	4.50	17.16	3.25	24.91
pubescens. Subsp. microphylla Superba, dwarf, pot 3 litre	nr	0.20	3.00	7.16	1.52	11.68
pubescens. Subsp. microphylla Superba, dwarf, pot 10 litre	nr	0.30	4.50	17.16	3.25	24.91
v. Charles Joly, dwarf, pot 3 litre	nr	0.20	3.00	7.16	1.52	11.68
v. Charles Joly, small, pot 10 litre	nr	0.30	4.50	17.16	3.25	24.91
v. Madame Lemoine, dwarf, pot 3 litre	nr	0.20	3.00	7.16	1.52	11.68
v. Madame Lemoine, small, pot 10 litre	nr	0.30	4.50	17.16	3.25	24.91
v. Michael Buchner, small, pot 10 litre	nr	0.30	4.50	17.46	3.29	25.25

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
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Specimen shrubs

The following descriptions refer to dimensions and sizes of shrubs as as set out below.

Dwarf: 20 to 60cm high
Small: 60 to 120cm high
Medium: 120 to 200cm high
Large: over 200cm high

Form planting hole in cultivated area, place shrub in hole, backfill, water and surround with peat

Acer (Maple)

p. Fireglow, medium, pot 25 litre	nr	0.60	9.00	74.83	12.57	96.40
p. Fireglow, medium, pot 50 litre	nr	1.00	15.00	124.72	20.96	160.68
p. Fireglow, large, pot 130 litre	nr	1.80	27.00	249.45	41.47	317.92

Betula (Birch)

pendula, large, pot 55 litre	nr	1.00	15.00	53.04	10.21	78.25
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Prunus (Cherry)

laurocerasus, medium, pot 15 litre	nr	0.40	6.00	56.13	9.32	71.45
laurocerasus, medium, pot 18 litre	nr	0.40	6.00	74.83	12.12	92.95

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
laurocerasus, medium, pot 25 litre	nr	0.60	9.00	111.70	18.11	138.81
laurocerasus, medium, pot 55 litre	nr	1.00	15.00	149.66	24.70	189.36
lusitanica, medium, pot 20 litre	nr	0.60	9.00	81.06	13.51	103.57
lusitanica, medium, pot 25 litre	nr	0.60	9.00	106.01	17.25	132.26

CLIMBERS

The following descriptions refer to dimensions and sizes of shrubs as as set out below.

Dwarf: 20 to 60cm high
 Small: 60 to 120cm high
 Medium: 120 to 200cm high
 Large: over 200cm high

**Form planting hole in
 cultivated area, place
 climber in hole, backfill,
 water and surround with
 peat**

Clematis

Blue Bird, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
x durandi, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Huldine, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Jackmanii, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Climber planting (cont'd)						
Laserstern, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Miss Bateman, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Nelly Moser, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Rouge Cardinal, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Sunset, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
The President, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Vyvyan Pennell, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Wyevale, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Clematis Species						
Alba Luxurians, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
armandii, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
a. Apple Blossom, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
flamula, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
montana, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
m. Grandiflora, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
m. var. rubens, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
montana var. sericea, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
o. Orange Peel, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
tangutica, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Venosa Violacea, small pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
vitalba, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
viticella, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
Hedera (Ivy)						
canariensis, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
canariensis, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
c. ravensholt, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
c. ravensholt, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
c. dentata, dwarf, pot pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
c. dentata, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
c. Sulphur Heart, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
c. Sulphur Heart, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
helix, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
helix, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Climber planting (cont'd)						
h. buttercup, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
h. buttercup, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
h. Goldchild, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
h. Goldchild, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
c. Green Ripple, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
c. Green Ripple, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
h. Ivalace, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
h. Ivalace, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
h. Kolibri, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
h. Kolibri, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
c. Light Fingers, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
c. Light Fingers, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
c. Little Diamond, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
c. Little Diamond, small, pot 2 litre	nr	0.10	1.50	4.66	0.92	7.08
h. Luzii, dwarf, pot 0.5 litre	nr	0.10	1.50	1.51	0.45	3.46
h. Luzii, small, pot 2 litre	nr	0.10	1.50	1.51	0.45	3.46

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Hydrangea						
anomala ssp. petiolaris, dwarf, pot 3 litre	nr	0.10	1.50	6.24	1.16	8.90
anomala ssp. petiolaris, small, pot 10 litre	nr	0.20	3.00	13.71	2.51	19.22
seemannii, small, pot pot 2 litre	nr	0.10	1.50	1.51	0.45	3.46
Jasminium (Jasmine)						
humile Revolutum, dwarf, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
nudiflorum, dwarf, pot pot 2 litre	nr	0.20	3.00	4.98	1.20	9.18
nudiflorum, small, pot pot 10 litre	nr	0.20	3.00	13.71	2.51	19.22
o. aureum, small, pot pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
o. Fiona Sunrise, small, pot 2 litre	nr	0.10	1.50	6.24	1.16	8.90
o. Inverleith, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
x. stephanense, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
Lonicera (Honeysuckle)						
x. brownii, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
x. heckrotii, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
henryi, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
x. italica, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Climber planting (cont'd)						
japonica Aureoreticulata, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
j. Halliana, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
periclymenum, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
p. Belgica, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
sempervirens, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
Passiflora (Passion flower)						
caerulea, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
c. rubra, small, pot 2 litre	nr	0.10	1.50	4.98	0.97	7.45
Rosa (Rose)						
banksiae Lutea, small, pot 4 litre	nr	0.15	2.25	5.31	1.13	8.69
Mermaid, small, pot 4 litre	nr	0.15	2.25	5.31	1.13	8.69
Wisteria						
Burford, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
Caroline, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
Caroline, medium, pot 10 litre	nr	0.20	3.00	18.71	3.26	24.97

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
floribunda Alba, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
floribunda Alba, medium, pot 10 litre	nr	0.20	3.00	18.71	3.26	24.97
f. Domimo, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
f. Domimo, medium, pot 10 litre	nr	0.20	3.00	18.71	3.26	24.97
f. Kuchi-beni, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
f. Lawrence, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
f. Multijuga, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
f. Rosea, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
f. Rosea, medium, pot 10 litre	nr	0.20	3.00	18.71	3.26	24.97
sinensis, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
s. Alba, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
s. Alba, medium, pot 10 litre	nr	0.20	3.00	18.71	3.26	24.97
s. Amethyst, small, pot 3 litre	nr	0.15	2.25	9.98	1.83	14.06
s. Amethyst, medium, pot 10 litre	nr	0.20	3.00	18.71	3.26	24.97
s. Blue Sapphire, small, pot 3 litre	nr	0.15	2.25	9.96	1.83	14.04
s. Prolific, small, pot 3 litre	nr	0.15	2.25	9.96	1.83	14.04
s. Prolific, medium, pot 10 litre	nr	0.20	3.00	18.71	3.26	24.97

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
HERBACEOUS PLANTS						
Form planting hole in cultivated area, place plant in hole, backfill, water and surround with peat						
<i>Anenome</i>						
hupehensis, 750mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
h. var. japonica, 1000mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
h. Splendens, 800mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
h. Elegans, 800mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
x h. Robustissima, 1200mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
x h. September, 750mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
x h. Whirlwind, 900mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
sylvestris Macrantha, 250mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
<i>Campanula</i> (Bell flower)						
carpatica, 200mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
c. White Clips, 200mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
cochlearifolia, 100mm high, pot 1 litre	nr	0.10	1.50	1.25	0.41	3.16
c. White Baby, 100mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
g. var.alba, 300mm high, pot 0.5 litre	nr	0.10	1.50	1.90	0.51	3.91
Kent Belle, 600mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
lactiflora Loddon Anna, 1200 high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
lactiflora Loddon Anna, 1500 high, pot 2 litre	nr	0.15	2.25	2.50	0.71	5.46
l. Violet, 1300mm high pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
l. Violet, 1300mm high pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
l. White Pouffe, 250mm high, pot 2 litre	nr	0.15	2.25	2.50	0.71	5.46
persifolia Alba, 900 high, pot 0.5 litre	nr	0.15	2.25	1.25	0.53	4.03
p. Caerulea Plena, 750mm high, pot 0.5 litre	nr	0.15	2.25	1.25	0.53	4.03
p. Telham Beauty, 900mm high, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
p. Stella, 250mm high, pot 1 litre	nr	0.15	2.25	2.50	0.71	5.46
punctata, 300mm high, pot 2 litre	nr	0.15	2.25	2.50	0.71	5.46
takesimana, 600mm high, pot 2 litre	nr	0.15	2.25	2.50	0.71	5.46
l. Elizabeth, 600mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Herbaceous plants planting (cont'd)						
Delphinium						
Astolat Group, 1500mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Astolat Group, 1500mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
Black Knight Group, 1800mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Black Knight Group, 1800mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
Blue Bird Group, 1500mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Blue Bird Group, 1500mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
Galahad Group, 1500mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Galahad Group, 1500mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
grandiflorum, 400mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
grandiflorum, 400mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
King Arthur Group, 1500mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
King Arthur Group, 1500mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Summer Skies Group, 1500mm high, pot 0.5 litre	nr	0.10	1.50	3.15	0.70	5.35
Summer Skies Group, 1500mm high, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
Geranium						
Anne Thomson, 600mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Bertie Crug, 200mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
x cantabrigiense, 250mm high, pot 2 litre	nr	0.15	2.25	2.33	0.69	5.27
cinerum Ballerina, 100mm high, pot 0.5 litre	nr	0.10	1.50	1.95	0.52	3.97
cinerum Ballerina, 100mm high, pot 2 litre	nr	0.10	1.50	4.07	0.84	6.41
c. var. subcaulescens, Splendens, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.95	0.52	3.97
c. var. subcaulescens, Splendens, 150mm high, pot 2 litre	nr	0.15	2.25	4.07	0.95	7.27
c. Kashmir Purple, 300mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
c. Kashmir White, 300mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
Johnson's Blue, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.63	0.47	3.60
Johnson's Blue, 150mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Herbaceous plants planting (cont'd)						
macrorrhizum Album, 300mm high, pot 0.5 litre	nr	0.10	1.50	1.84	0.50	3.84
macrorrhizum Album, 300mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
m. Variegatum, 300mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
m. magnificum, 600mm high, pot 2 litre	nr	0.15	2.25	2.33	0.69	5.27
x. oxonianum, 450mm high, pot 2 litre	nr	0.15	2.25	2.33	0.69	5.27
x o. Wargrove Pink, 400mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
x o. Wargrove Pink, 400mm high, pot 2 litre	nr	0.15	2.25	2.33	0.69	5.27
Patricia, 750mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
phaeum, 800mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Samobor, 400mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
pstilostemon, 1200mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
renardi, 250mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
x r. Russell Prichard, 200mm high, pot 0.5 litre	nr	0.10	1.50	1.95	0.52	3.97

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
x r. Russell Prichard, 200mm high, pot 2 litre	nr	0.15	2.25	4.07	0.95	7.27
Salome, 450mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
s. Album, 300mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
s. Max Frei, 200mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Spinners, 900mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Sue Crug, 300mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
s. Mayflower, 300mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Westray, 300mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Gypsophila						
paniculata Bristol Fairy, 1200mm high, pot 0.5 litre	nr	0.10	1.50	1.57	0.46	3.53
paniculata Bristol Fairy, 1200mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
p.Flamingo, 900mm high, pot 0.5 litre	nr	0.10	1.50	1.57	0.46	3.53
p.Flamingo, 900mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
repens Alba, 900mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
r. rosea, 900mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Herbaceous plants planting (cont'd)						
Iris						
Amber Queen, 200mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Blue Denim, 250mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Lilli-white, 300mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Orange Caper, 250mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Black Swan, 1000mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Braithwaite, 900mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Jane Phillips, 1200mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Rajah, 900mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Sable, 900mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Stepping Out, 1000mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
White Knight, 1000mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
Lupinus (Lupin)						
Chandelier, 1000mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
My Castle, 1000mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
Noble Maiden, 1000mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
The Chateleine, 1000mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
The Governor, 1000mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
Paeonia (Peony)						
lactiflora, 900mm high, pot 3 litre	nr	0.15	2.25	5.31	1.13	8.69
I. Duchesse de Nemours, 1000mm high, pot 3 litre	nr	0.15	2.25	5.31	1.13	8.69
I. Festiva Maxima, 1000mm high, pot 3 litre	nr	0.15	2.25	5.31	1.13	8.69
I. Karl Rosenfeld, 1000mm high, pot 3 litre	nr	0.15	2.25	5.31	1.13	8.69
I. Sarah Bernhardt, 1000mm high, pot 3 litre	nr	0.15	2.25	5.31	1.13	8.69
officinalis Alba Plena, 750mm high, pot 3 litre	nr	0.15	2.25	5.31	1.13	8.69
o. Rosea Plena, 750mm high, pot 3 litre	nr	0.15	2.25	5.31	1.13	8.69
o. Rubra Plena, 750mm high, pot 3 litre	nr	0.15	2.25	5.31	1.13	8.69
Phlox						
douglasii Ice Mountain, 100mm high, pot 1 litre	nr	0.10	1.50	2.49	0.60	4.59

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Herbaceous plants planting (cont'd)						
paniculata Blue Paradise, 800mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Fujiyama, 800mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Jules Sandeau, 800mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Kirchenfuerst, 800mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Little Boy, 700mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Little Laura, 600mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Little Princess, 500mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Mia Ruys, 800mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Norah Leigh, 600mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Orange Perfection, 750mm, high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Rijnstroom, 900mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. Starfire, 900mm high, pot 2 litre	nr	0.15	2.25	3.42	0.85	6.52
p. White Admiral, 900mm, high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
x procumbens Variegata, 200mm, high, pot 2 litre	nr	0.15	2.25	3.47	0.86	6.58
s. Emerald Cushion Blue, 200mm, high, pot 1 litre	nr	0.10	1.50	2.49	0.60	4.59

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Primula						
x bulleesiana, 500mm high, pot 2 litre	nr	0.15	2.25	2.82	0.76	5.83
bulleyana, 600mm high, pot 2 litre	nr	0.15	2.25	2.82	0.76	5.83
d. Lilac, 250mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
d. Lilac, 250mm high, pot 2 litre	nr	0.15	2.25	2.82	0.76	5.83
d. Ruby, 250mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
d. Ruby, 250mm high, pot 2 litre	nr	0.15	2.25	2.82	0.76	5.83
florindae, 600mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
florindae, 600mm high, pot 2 litre	nr	0.15	2.25	2.82	0.76	5.83
j. Postford White, 600mm, high, pot 2 litre	nr	0.15	2.25	2.82	0.76	5.83
pulverenta, 600mm high, pot 2 litre	nr	0.15	2.25	2.82	0.76	5.83
rosae, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
rosae, 150mm high, pot 2 litre	nr	0.15	2.25	2.82	0.76	5.83
veris, 200mm high, pot 0.5 litre	nr	0.10	1.50	1.36	0.43	3.29
vialli, 300mm high, pot 0.5 litre	nr	0.10	1.50	1.57	0.46	3.53
vulgaris acaulis, 300mm high, pot 0.5 litre	nr	0.10	1.50	1.57	0.46	3.53
vulgaris acaulis, 150mm high, pot 0.5 litre	nr	0.15	2.25	1.57	0.57	4.39

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Herbaceous plants planting (cont'd)						
vulgaris acaulis, 150mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
Wanda, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Salvia						
nemorosa Amethyst, 650mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
n. Ostfriesland, 450mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
n. Ostfriesland, 450mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
n. Rose Queen, 450mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
officinalis, 600mm high pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
o. Aurea, 300mm high pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
o. Aurea, 300mm high pot 2 litre	nr	0.10	1.50	3.74	0.79	6.03
o. Icterina, 600mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
o. Icterina, 600mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
o. Purpurascens, 600mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
o. Purpurascens, 600mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
o. Tricolor, 600mm high, pot 1 litre	nr	0.10	1.50	4.26	0.86	6.62
o. Tricolor, 600mm						

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
patens, 450mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
p. Cambridge Blue, 600mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
verticillata Alba, 600mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
v. Purple Rain, 450mm high, pot 2 litre	nr	0.15	2.25	3.15	0.81	6.21
Veronica						
gentianoides, 300mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
peduncularis, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
prostrata, 100mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
p. Trehane, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
spicata, 750mm high, pot 2 litre	nr	0.15	2.25	3.74	0.90	6.89
s. Alba, 400mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Viola (Violet)						
Ardross Gem, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Ardross Gem, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
Belmont Blue, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Belmont Blue, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Herbaceous plants planting (cont'd)						
Buttercup, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Buttercup, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
Dawn, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Dawn, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
Etain, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Etain, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
Jackanapes, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Jackanapes, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
Janet, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Janet, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
Labradorica, 100mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Maggie Matt, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Maggie Matt, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
Mrs Lancaster, 150mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16
Mrs Lancaster, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
odorata, 100mm high, pot 0.5 litre	nr	0.10	1.50	1.25	0.41	3.16

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Rebecca, 150mm high, pot 0.5 litre	nr	0.10	1.50	2.50	0.60	4.60
Rebecca, 150mm high, pot 1 litre	nr	0.10	1.50	1.25	0.41	3.16
Roscastle Black, 150mm high, pot 0.5 litre	nr	0.10	1.50	2.50	0.60	4.60
Roscastle Black, 150mm high, pot 1 litre	nr	0.10	1.50	1.25	0.41	3.16
scoria Freckles, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60
Zoe, 150mm high, pot 1 litre	nr	0.10	1.50	2.50	0.60	4.60

HEDGING

The following descriptions refer to dimensions and sizes of hedge plants as set out below.

Dwarf: 20 to 60cm high
 Small: 60 to 120cm high
 Medium: 120 to 200cm high
 Large: over 200cm high

**Form planting hole in
cultivated area, place
hedging plant in hole, backfill,
water and surround with
peat**

Acer (Maple)

campestre, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
campestre, small, pot 1 litre	nr	0.10	1.50	0.65	0.32	2.47

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Hedging (cont'd)						
campestre, medium, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
campestre, medium, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
platanoides, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
platanoides, small, pot 1 litre	nr	0.10	1.50	0.65	0.32	2.47
platanoised, medium, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
platanoides, medium, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
platanoides, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
platanoides, small, pot 1 litre	nr	0.10	1.50	0.65	0.32	2.47
platanoised, medium, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
platanoides, medium, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
pseudoplatanus, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
pseudoplatanus, small, pot 1 litre	nr	0.10	1.50	0.65	0.32	2.47
pseudoplatanus, medium, pot 1 litre	nr	0.15	2.25	0.76	0.45	3.46
pseudoplatanus, medium, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
Alnus (Alder)						
cordata, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
cordata, small, pot						
1 litre	nr	0.10	1.50	0.65	0.32	2.47
codarta, medium, pot						
1 litre	nr	0.10	1.50	0.76	0.34	2.60
cordata, medium, pot						
2 litre	nr	0.15	2.25	1.25	0.53	4.03
glutinosa, small, pot						
1 litre	nr	0.10	1.50	0.60	0.32	2.42
glutinosa, small, pot						
1 litre	nr	0.10	1.50	0.65	0.32	2.47
glutinosa, medium, pot						
1 litre	nr	0.10	1.50	0.76	0.34	2.60
glutinosa, medium, pot						
2 litre	nr	0.15	2.25	1.25	0.53	4.03
incana, small, pot						
1 litre	nr	0.10	1.50	0.60	0.32	2.42
incana, small, pot						
1 litre	nr	0.10	1.50	0.65	0.32	2.47
incana, medium, pot						
1 litre	nr	0.10	1.50	0.76	0.34	2.60
incana, medium, pot						
2 litre	nr	0.15	2.25	1.25	0.53	4.03
Betula (Birch)						
pendula, small, pot						
1 litre	nr	0.10	1.50	0.60	0.32	2.42
pendula, small, pot						
1 litre	nr	0.10	1.50	0.65	0.32	2.47
pendula, medium, pot						
1 litre	nr	0.10	1.50	0.76	0.34	2.60
pendula, medium, pot						
2 litre	nr	0.15	2.25	1.25	0.53	4.03

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Hedging (cont'd)						
pubescens, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
pubescens, small, pot 1 litre	nr	0.10	1.50	0.65	0.32	2.47
pubescens, medium, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
Chamaecyparis (Cypress)						
lawsoniana, small, pot 3 litre	nr	0.20	3.00	5.63	1.29	9.92
lawsoniana, small, pot 10 litre	nr	0.30	4.50	9.98	2.17	16.65
Crataegus (Hawthorn)						
laevigata, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
laevigata, small, pot 1 litre	nr	0.10	1.50	0.65	0.32	2.47
laevigata, medium, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
laevigata, medium, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
Cupressocyparis						
leylandii, small, pot 3 litre	nr	0.20	3.00	3.74	1.01	7.75
leylandii, medium, pot 10 litre	nr	0.30	4.50	9.98	2.17	16.65
l. Castlewella, small, pot 3 litre	nr	0.20	3.00	3.74	1.01	7.75

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
I. Castlewellaan, small, pot 3 litre	nr	0.20	3.00	3.74	1.01	7.75
Fagus (Beech)						
sylvatica, dwarf, pot 3 litre	nr	0.20	3.00	2.50	0.83	6.33
sylvatica, dwarf, pot 10 litre	nr	0.30	4.50	12.47	2.55	19.52
Fagus						
pendula, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
pendula, small, pot 1 litre	nr	0.10	1.50	0.92	0.36	2.78
pendula, medium, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
pendula, medium, pot 2 litre	nr	0.15	2.25	1.63	0.58	4.46
Atropurpurea, small, pot 1 litre	nr	0.10	1.50	2.00	0.53	4.03
Atropurpurea, small, pot 1 litre	nr	0.10	1.50	2.60	0.62	4.72
Atropurpurea, medium, pot 2 litre	nr	0.15	2.25	2.82	0.76	5.83
Atropurpurea, medium, pot 2 litre	nr	0.15	2.25	4.07	0.95	7.27
Ligustrum (Privet)						
ovalifolium, dwarf, pot 1 litre	nr	0.10	1.50	0.55	0.31	2.36
ovalifolium, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Hedging (cont'd)						
ovalifolium, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
ovalifolium, small, pot 3 litre	nr	0.20	3.00	2.50	0.83	6.33
vulgare, dwarf, pot 1 litre	nr	0.10	1.50	0.55	0.31	2.36
vulgare, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
vulgare, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
vulgare, small, pot 3 litre	nr	0.20	3.00	2.50	0.83	6.33
Prunus (Cherry)						
avium, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
avium, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
avium, medium, pot 1 litre	nr	0.10	1.50	1.25	0.41	3.16
cerasifera, small, pot 1 litre	nr	0.10	1.50	0.55	0.31	2.36
cerasifera, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
cerasifera, medium, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
laurocerasus, small, pot 3 litre	nr	0.20	3.00	2.50	0.83	6.33
laurocerasus, small, pot 3 litre	nr	0.20	3.00	3.75	1.01	7.76
laurocerasus, small, pot 10 litre	nr	0.30	4.50	13.76	2.74	21.00

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
lusitanica, dwarf, pot 3 litre	nr	0.20	3.00	3.75	1.01	7.76
lusitanica, dwarf, pot 3 litre	nr	0.20	3.00	4.35	1.10	8.45
lusitanica, small, pot 10 litre	nr	0.30	4.50	13.76	2.74	21.00
padus, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
padus, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
padus, medium, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
spinosa, dwarf, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
spinosa, small, pot 1 litre	nr	0.10	1.50	0.70	0.33	2.53
spinosa, small, pot 1 litre	nr	0.10	1.50	1.03	0.38	2.91
Quercus (Oak)						
cerris, dwarf, pot 1 litre	nr	0.10	1.50	0.70	0.33	2.53
cerris, small, pot 1 litre	nr	0.10	1.50	0.92	0.36	2.78
ilex, dwarf, pot 3 litre	nr	0.20	3.00	3.75	1.01	7.76
ilex, small, pot 3 litre	nr	0.20	3.00	5.00	1.20	9.20
ilex, medium, pot 10 litre	nr	0.30	4.50	17.51	3.30	25.31
palustris, dwarf, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
palustris, small, pot 1 litre	nr	0.10	1.50	0.92	0.36	2.78
robur, dwarf, pot 1 litre	nr	0.10	1.50	0.70	0.33	2.53
robur, small, pot 2 litre	nr	0.15	2.25	0.92	0.48	3.65

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Hedging (cont'd)						
robur, small, pot 1 litre	nr	0.10	1.50	1.03	0.38	2.91
robur, medium, pot 2 litre	nr	0.15	2.25	1.63	0.58	4.46
rubra, dwarf, pot 1 litre	nr	0.10	1.50	0.70	0.33	2.53
rubra, small, pot 2 litre	nr	0.15	2.25	0.92	0.48	3.65
rubra, small, pot 1 litre	nr	0.10	1.50	1.03	0.38	2.91
rubra, medium, pot 2 litre	nr	0.15	2.25	1.63	0.58	4.46
Salix (Willow)						
alba, small, pot 1litre	nr	0.10	1.50	0.60	0.32	2.42
alba, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
alba, medium, pot 1 litre	nr	0.15	2.25	1.25	0.53	4.03
a. Liempde, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
a. Liempde, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
alba var.caerulea, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
alba var.caerulea, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
a. subsp. vitellina, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
a. subsp. vitellina, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
a. subsp. vitellina, small, pot 3 litre	nr	0.20	3.00	2.50	0.83	6.33
caprea, small, pot 1litre	nr	0.10	1.50	0.60	0.32	2.42
caprea, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60

	Unit	Labour	Hours	Mat'ls	O & P	Total
caprea, medium, pot 1 litre	nr	0.15	2.25	1.25	0.53	4.03
cinerea, small, pot 1litre	nr	0.10	1.50	0.60	0.32	2.42
cinerea, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
cinerea, small, pot 3 litre	nr	0.20	3.00	2.50	0.83	6.33
daphnoides, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
daphnoides, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
daphnoides, small, pot 3 litre	nr	0.10	1.50	2.50	0.60	4.60
elaeangnos, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
elaeangnos, small, pot 3 litre	nr	0.20	3.00	2.50	0.83	6.33
viminalis, small, pot 1 litre	nr	0.10	1.50	0.60	0.32	2.42
viminalis, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
viminalis, small, pot 3 litre	nr	0.10	1.50	2.50	0.60	4.60
Sorbus (Whitebeam)						
aria, small, pot 1litre	nr	0.10	1.50	0.76	0.34	2.60
aria, small, pot 1litre	nr	0.10	1.50	0.98	0.37	2.85
aria, small, pot 1litre	nr	0.10	1.50	1.20	0.41	3.11
aria, medium, pot 1 litre	nr	0.15	2.25	1.63	0.58	4.46
acuparia, small, pot 1 litre	nr	0.10	1.50	0.54	0.31	2.35
acuparia, small, pot 1 litre	nr	0.10	1.50	0.65	0.32	2.47
acuparia, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Hedging (cont'd)						
acuparia, medium, pot 2 litre	nr	0.15	2.25	1.25	0.53	4.03
intermedia, small, pot 1 litre	nr	0.10	1.50	0.76	0.34	2.60
intermedia, small, pot 1 litre	nr	0.10	1.50	0.98	0.37	2.85
intermedia, small, pot 1 litre	nr	0.10	1.50	1.20	0.41	3.11
intermedia, medium, pot 2 litre	nr	0.15	2.25	1.63	0.58	4.46

BEDDING PLANTS

The following items cover the work involved in the creation of a formal bedding display. The cost of supplying and bedding the plants has not been included because of the wide variation in density, design pattern and quality of the plants involved.

Protect edge of existing lawn with polythene sheeting (6 uses)	m	0.03	0.45	0.06	0.08	0.59
Remove existing plants from bed	m2	1.40	21.00	-	3.15	24.15

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Fork over to a depth of 300mm, remove weeds and rake over	m2	2.00	30.00	-	4.50	34.50
Cut edge of existing lawn with shears	m	0.03	0.45	-	0.07	0.52
Dig trench 300mm deep and fork in well-rotted manure 100mm deep to bottom of trench	m	0.12	1.80	0.16	0.29	2.25

MAINTENANCE WORK BY HAND

Grassed areas

Pick up litter and remove	100m2	0.15	2.25	1.63	0.58	4.46
Rake up loose grass and place in heaps for disposal	100m2	0.35	5.25	1.63	1.03	7.91
Trim edges of grassed areas with edging tool	100m2	0.50	7.50	1.63	1.37	10.50
Aerate by forking	100m2	1.50	22.50	1.63	3.62	27.75
Sweep up corings and place in heaps for disposal	100m2	1.50	22.50	1.63	3.62	27.75
Apply weedkiller (175 kg per ha)	100m2	0.50	7.50	0.33	1.17	9.00

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Apply fertiliser (35g per ha)	100m2	0.50	7.50	0.33	1.17	9.00
Planted areas						
Remove stones and debris and place in heaps for disposal	100m2	1.00	15.00	0.33	2.30	17.63
Weed and hoe and place weeds in heaps for disposal	100m2	1.00	15.00	0.33	2.30	17.63
Fine-grade bark mulch, thickness						
50mm	100m2	1.50	22.50	141.38	24.58	188.46
75mm	100m2	1.75	26.25	212.07	35.75	274.07
100mm	100m2	2.00	30.00	282.76	46.91	359.67
Medium-grade bark mulch, thickness						
50mm	100m2	1.50	22.50	204.45	34.04	260.99
75mm	100m2	1.75	26.25	306.68	49.94	382.87
100mm	100m2	2.00	30.00	398.04	64.21	492.25
Coarse-grade bark mulch, thickness						
50mm	100m2	1.50	22.50	243.61	39.92	306.03
75mm	100m2	1.75	26.25	365.41	58.75	450.41
100mm	100m2	2.00	30.00	487.21	77.58	594.79

	Unit	Plant £	Mat'ls £	O & P £	Total £
MAINTENANCE WORK BY MACHINE					
Where applicable the plant column includes the cost of the operator.					
Grassed areas					
Sweep up leaves with motorised vacuum cleaner	100m2	0.84	-	0.13	0.97
Cut grass to specified height with					
petrol-powered mower	100m2	2.40	-	0.36	2.76
multi-unit mower	100m2	0.48	-	0.07	0.55
ride-on rotary mower	100m2	0.67	-	0.10	0.77
Aerate grassed surfaces with					
slitter aerator	100m2	5.56	-	0.83	6.39
tractor-drawn aeratot	100m2	3.22	-	0.48	3.70
Harrow grassed surfaces with					
chain harrow	100m2	0.98	-	0.15	1.13
drag mat	100m2	1.10	-	0.17	1.27

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
SUNDRIES						
Treated softwood tree stakes driven into the ground						
50mm diameter						
1.7m long	nr	0.10	1.50	2.04	0.53	4.07
2.0m long	nr	0.12	1.80	2.39	0.63	4.82
2.4m long	nr	0.14	2.10	2.88	0.75	5.73
100mm diameter						
1.7m long	nr	0.14	2.10	2.70	0.72	5.52
2.0m long	nr	0.16	2.40	3.24	0.85	6.49
2.4m long	nr	0.18	2.70	3.74	0.97	7.41
Cleft chestnut tree stakes driven into the ground						
50-70mm wide						
1.7m long	nr	0.10	1.50	1.77	0.49	3.76
2.0m long	nr	0.12	1.80	2.15	0.59	4.54
2.4m long	nr	0.14	2.10	2.57	0.70	5.37
Tree ties, buckle type						
25 x 450mm	nr	0.05	0.75	0.49	0.19	1.43
25 x 600mm	nr	0.05	0.75	0.60	0.20	1.55
Galvanised wire net tree guards						
150mm diameter x 450mm high	nr	0.30	4.50	8.21	1.91	14.62
150mm diameter x 600mm high	nr	0.30	4.50	9.39	2.08	15.97

		Unit	Plant £	Mat'ls £	O & P £	Total £
200mm diameter x 1000mm high	nr	0.35	4.90	9.66	2.18	16.74
200mm diameter x 1200mm high	nr	0.35	4.90	10.16	2.26	17.32
250mm diameter x 1400mm high	nr	0.35	4.90	11.48	2.46	18.84
250mm diameter x 1800mm high	nr	0.35	4.90	12.93	2.67	20.50
Bio-degradable tree guards						
600mm high	nr	0.10	1.40	1.07	0.37	2.84
750mm high	nr	0.10	1.40	1.25	0.40	3.05
900mm high	nr	0.10	1.40	1.44	0.43	3.27
1200mm high	nr	0.10	1.40	1.61	0.45	3.46

Part Two

UNIT RATES

- Hard landscaping
 - Brick walling
 - Masonry
 - Precast concrete
 - Sub-bases
 - Beds and pavings
 - Fencing
 - Drainage

Unit Labour	Hours	Mat'ls	O & P	Total
	£	£	£	£

BRICK WALLING

Common bricks (basic
price £140 per thousand)
in cement mortar (1:3),
stretcher bond

walls

half brick thick	m2	1.70	25.50	11.03	5.48	42.01
half brick thick curved	m2	2.30	34.50	11.03	6.83	52.36
one brick thick	m2	2.80	42.00	22.91	9.74	74.65
one brick thick curved	m2	3.40	51.00	22.91	11.09	85.00
one and a half brick thick	m2	3.50	52.50	35.53	13.20	101.23
two brick thick	m2	4.20	63.00	48.12	16.67	127.79
two brick thick battered	m2	4.80	72.00	48.12	18.02	138.14

walls, facework one side

half brick thick	m2	1.80	27.00	11.03	5.70	43.73
half brick thick curved	m2	2.40	36.00	11.03	7.05	54.08
one brick thick	m2	2.90	43.50	22.91	9.96	76.37
one brick thick curved	m2	3.50	52.50	22.91	11.31	86.72
one and a half brick thick	m2	3.60	54.00	35.53	13.43	102.96
two brick thick	m2	4.30	64.50	48.12	16.89	129.51
two brick thick battered	m2	4.90	73.50	48.12	18.24	139.86

walls, facework both sides

half brick thick	m2	1.90	28.50	11.03	5.93	45.46
half brick thick curved	m2	2.50	37.50	11.03	7.28	55.81
one brick thick	m2	3.00	45.00	22.91	10.19	78.10
one brick thick curved	m2	3.60	54.00	22.91	11.54	88.45
one and a half brick thick	m2	3.70	55.50	22.91	11.76	90.17

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Common bricks (cont'd)						
two brick thick	m2	4.40	66.00	48.12	17.12	131.24
two brick thick battered	m2	5.00	75.00	48.12	18.47	141.59
Common bricks (basic price £200 per thousand) in cement mortar (1:3), stretcher bond						
walls						
half brick thick	m2	1.70	25.50	14.81	6.05	46.36
half brick thick curved	m2	2.30	34.50	14.81	7.40	56.71
one brick thick	m2	2.80	42.00	30.63	10.89	83.52
one brick thick curved	m2	3.40	51.00	30.63	7.65	58.65
one and a half brick thick	m2	3.50	52.50	46.74	14.89	114.13
two brick thick	m2	4.20	63.00	46.74	16.46	126.20
two brick thick battered	m2	4.80	72.00	63.11	20.27	155.38
walls, facework one side						
half brick thick	m2	1.80	27.00	14.81	6.27	48.08
half brick thick curved	m2	2.40	36.00	14.81	7.62	58.43
one brick thick	m2	2.90	43.50	30.63	11.12	85.25
one brick thick curved	m2	3.50	52.50	30.63	12.47	95.60
one and a half brick thick	m2	3.60	54.00	46.74	15.11	115.85
two brick thick	m2	4.30	64.50	46.74	16.69	127.93
two brick thick battered	m2	4.90	73.50	63.11	20.49	157.10
walls, facework both sides						
half brick thick	m2	1.90	28.50	14.81	6.50	49.81

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
half brick thick curved	m2	2.50	37.50	14.81	7.85	60.16
one brick thick	m2	3.00	45.00	14.81	8.97	68.78
one brick thick curved	m2	3.60	54.00	30.63	12.69	97.32
one and a half brick thick	m2	3.70	55.50	30.63	12.92	99.05
two brick thick	m2	4.40	66.00	46.74	16.91	129.65
two brick thick battered	m2	5.00	75.00	63.11	20.72	158.83
Facing bricks (basic price £250 per thousand) in cement mortar (1:3), English garden wall bond						
walls, facework one side						
one brick thick	m2	2.90	43.50	30.63	11.12	85.25
one brick thick curved	m2	3.50	52.50	30.63	12.47	95.60
one and a half brick thick	m2	3.60	54.00	46.74	15.11	115.85
two brick thick	m2	4.30	64.50	63.11	19.14	146.75
two brick thick battered	m2	4.90	73.50	63.11	20.49	157.10
walls, facework both sides						
one brick thick	m2	3.00	45.00	30.63	11.34	86.97
one brick thick curved	m2	3.60	54.00	30.63	12.69	97.32
one and a half brick thick	m2	3.70	55.50	46.74	15.34	117.58
two brick thick	m2	4.40	66.00	63.11	19.37	148.48
two brick thick battered	m2	5.00	75.00	63.11	20.72	158.83
Isolated casings, half brick thick, faced all round	m2	2.30	34.50	18.51	7.95	60.96

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Isolated casings, half brick thick, faced all round	m2	2.30	34.50	18.51	7.95	60.96
Isolated piers, one brick thick, faced all round	m2	2.30	34.50	38.29	10.92	83.71
Arches						
215mm high, 102mm wide	m2	1.30	19.50	4.80	3.65	27.95
215mm high, 215mm wide	m2	2.00	30.00	6.16	5.42	41.58
215mm high, 102mm wide, segmental	m2	2.70	40.50	9.13	7.44	57.07
215mm high, 315mm wide, segmental	m2	3.80	57.00	13.20	10.53	80.73
Facing bricks (basic price £350 per thousand) in cement mortar (1:3), English garden wall bond						
walls, facework one side						
one brick thick	m2	2.90	43.50	49.22	13.91	106.63
one brick thick curved	m2	3.50	52.50	49.22	15.26	116.98
one and a half brick thick	m2	3.60	54.00	74.78	19.32	148.10
two brick thick	m2	4.30	64.50	100.60	24.77	189.87
two brick thick battered	m2	4.90	73.50	100.60	26.12	200.22
walls, facework both sides						
one brick thick	m2	3.00	45.00	49.22	14.13	108.35

	Unit	Hours	Hours £	Mat'ls £	O & P £	Total £
one brick thick curved	m2	3.60	54.00	49.22	15.48	118.70
one and a half brick thick	m2	3.70	55.50	49.22	15.71	120.43
two brick thick	m2	4.40	66.00	74.78	21.12	161.90
two brick thick battered	m2	5.00	75.00	100.60	26.34	201.94
Isolated casings, half brick thick, faced all round	m2	2.30	34.50	30.33	9.72	74.55
Isolated piers, one brick thick, faced all round	m2	2.30	34.50	61.52	14.40	110.42
Arches						
215mm high, 102mm wide	m2	1.30	19.50	6.93	3.96	30.39
215mm high, 215mm wide	m2	2.00	30.00	7.30	5.60	42.90
215mm high, 102mm wide, segmental	m2	2.70	40.50	8.31	7.32	56.13
215mm high, 315mm wide, segmental	m2	3.80	57.00	11.94	10.34	79.28
Facing bricks (basic price £250 per thousand) in cement mortar (1:3), flemish bond						
walls, facework one side						
one brick thick	m2	2.90	43.50	36.71	12.03	92.24
one brick thick curved	m2	3.50	52.50	36.71	13.38	102.59
one and a half brick thick	m2	3.60	54.00	56.19	16.53	126.72
two brick thick	m2	4.30	64.50	65.61	19.52	149.63
two brick thick battered	m2	4.90	73.50	65.61	20.87	159.98

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
walls, facework both sides						
one brick thick	m2	3.00	45.00	36.71	12.26	93.97
one brick thick curved	m2	3.60	54.00	36.71	13.61	104.32
one and a half brick thick	m2	3.70	55.50	56.19	16.75	128.44
two brick thick	m2	4.40	66.00	65.61	19.74	151.35
two brick thick battered	m2	5.00	75.00	65.61	21.09	161.70
Isolated casings, half brick thick, faced all round	m2	2.30	34.50	23.88	8.76	67.14
Isolated piers, one brick thick, faced all round	m2	2.30	34.50	31.77	9.94	76.21
Arches						
215mm high, 102mm wide	m2	1.30	19.50	4.80	3.65	27.95
215mm high, 215mm wide	m2	2.00	30.00	8.07	5.71	43.78
215mm high, 102mm wide, segmental	m2	2.70	40.50	9.13	7.44	57.07
215mm high, 315mm wide, segmental	m2	3.80	57.00	13.20	10.53	80.73
Facing bricks (basic price £350 per thousand) in cement mortar (1:3), flemish bond						
walls, facework one side						
one brick thick	m2	2.90	43.50	24.26	10.16	77.92
one brick thick curved	m2	3.50	52.50	24.26	11.51	88.27
one and a half brick thick	m2	3.60	54.00	49.22	15.48	118.70

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
two brick thick	m2	4.30	64.50	74.78	20.89	160.17
two brick thick battered	m2	4.90	73.50	100.60	26.12	200.22
walls, facework both sides						
one brick thick	m2	3.00	45.00	24.26	10.39	79.65
one brick thick curved	m2	3.60	54.00	24.26	11.74	90.00
one and a half brick thick	m2	3.70	55.50	49.22	15.71	120.43
two brick thick	m2	4.40	66.00	74.78	21.12	161.90
two brick thick battered	m2	5.00	75.00	100.60	26.34	201.94
Isolated casings, half brick thick, faced all round	m2	2.30	34.50	26.67	9.18	70.35
Isolated piers, one brick thick, faced all round	m2	2.30	34.50	54.14	13.30	101.94
Arches						
215mm high, 102mm wide	m2	1.30	19.50	6.93	3.96	30.39
215mm high, 215mm wide	m2	2.00	30.00	7.30	5.60	42.90
215mm high, 102mm wide, segmental	m2	2.70	40.50	8.27	7.32	56.09
215mm high, 315mm wide, segmental	m2	3.80	57.00	11.88	10.33	79.21

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
MASONRY						
Random rubble walling, laid dry, thickness						
300mm	m2	3.00	45.00	50.38	14.31	109.69
450mm	m2	3.50	52.50	75.52	19.20	147.22
500mm	m2	3.75	56.25	85.20	21.22	162.67
Random rubble walling, laid dry, battered one side, thickness						
300mm	m2	3.25	48.75	54.63	15.51	118.89
450mm	m2	3.75	56.25	81.87	20.72	158.84
500mm	m2	4.00	60.00	92.36	22.85	175.21
Random rubble walling, laid dry, battered both sides, thickness						
300mm	m2	3.50	52.50	54.63	16.07	123.20
450mm	m2	4.00	60.00	81.87	21.28	163.15
500mm	m2	4.25	63.75	92.36	23.42	179.53
Random rubble walling, laid in gauged mortar (1:1:6), thickness						
300mm	m2	3.20	48.00	70.23	17.73	135.96
450mm	m2	3.70	55.50	102.67	23.73	181.90
500mm	m2	3.90	58.50	115.76	26.14	200.40

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Random rubble walling, laid in gauged mortar (1:1:6), thickness, battered one side						
300mm	m2	3.45	51.75	70.23	18.30	140.28
450mm	m2	4.00	60.00	102.67	24.40	187.07
500mm	m2	4.15	62.25	115.76	26.70	204.71
Random rubble walling, laid in gauged mortar (1:1:6), thickness, battered both sides						
300mm	m2	3.95	59.25	70.23	19.42	148.90
450mm	m2	4.50	67.50	102.67	25.53	195.70
500mm	m2	4.65	69.75	115.76	27.83	213.34
Irregular coursed rubble walling, laid in gauged mortar (1:1:6), thickness						
300mm	m2	2.10	31.50	70.23	15.26	116.99
450mm	m2	2.90	43.50	102.67	21.93	168.10
500mm	m2	3.40	51.00	115.76	25.01	191.77
Coursed rubble walling, laid in gauged mortar (1:1:6), thickness						
300mm	m2	2.40	36.00	70.23	15.93	122.16
450mm	m2	3.20	48.00	102.67	22.60	173.27
500mm	m2	3.70	55.50	115.76	25.69	196.95

	Unit	Labour	Hours	Mat'ls	O & P	Total
			£	£	£	£
Fair raking cutting on stone walling, thickness						
300mm	m	0.80	12.00	3.17	2.28	17.45
450mm	m	1.20	18.00	5.13	3.47	26.60
500mm	m	1.80	27.00	5.89	4.93	37.82
Form level bed on stone walling, thickness						
300mm	m	0.20	3.00	0.90	0.59	4.49
450mm	m	0.35	5.25	1.45	1.01	7.71
500mm	m	0.50	7.50	1.58	1.36	10.44
Sundries						
Form holes for pipes up to 50mm diameter through stone walling, thickness						
300mm	m	1.20	18.00	0.00	2.70	20.70
450mm	m	1.80	27.00	0.00	4.05	31.05
500mm	m	2.65	39.75	0.00	5.96	45.71
Form holes for pipes 50–100mm diameter through stone walling, thickness						
300mm	m	1.40	21.00	0.00	3.15	24.15
450mm	m	2.00	30.00	0.00	4.50	34.50
500mm	m	2.85	42.75	0.00	6.41	49.16

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Form holes for pipes over 100mm diameter through stone walling, thickness						
300mm	m	2.40	36.00	0.00	5.40	41.40
450mm	m	3.00	45.00	0.00	6.75	51.75
500mm	m	3.85	57.75	0.00	8.66	66.41
Build in ends of steel sections in stone walling, size						
not exceeding 250mm deep	m	0.70	10.50	0.00	1.58	12.08
250–500mm deep	m	0.90	13.50	0.00	2.03	15.53
over 500mm deep	m	1.10	16.50	0.00	2.48	18.98
Mortices in stone walling, size						
50 × 50 × 100mm	nr	0.60	9.00	0.00	1.35	10.35
50 × 50 × 150mm	nr	0.65	9.75	0.00	1.46	11.21
75 × 75 × 100mm	nr	0.70	10.50	0.00	1.58	12.08
75 × 75 × 150mm	nr	0.75	11.25	0.00	1.69	12.94
Grout up mortices in cement mortar (1:3)						
50 × 50 × 100mm	nr	0.10	1.50	0.05	0.23	1.78
50 × 50 × 150mm	nr	0.15	2.25	0.22	0.37	2.84
75 × 75 × 100mm	nr	0.15	2.25	0.33	0.39	2.97
75 × 75 × 150mm	nr	0.20	3.00	0.38	0.51	3.89

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Damp proof courses						
Hessian based bitumen damp-proof course bedded in gauged mortar(1:1:6)						
horizontal, width over 215mm	m2	0.35	5.25	2.32	1.14	8.71
112mm	m	0.05	0.75	1.14	0.28	2.17
vertical, width over 215mm	m2	0.40	6.00	2.32	1.25	9.57
112mm	m	0.07	1.05	1.14	0.33	2.52
Fibre-based bitumen damp-proof course bedded in gauged mortar(1:1:6)						
horizontal, width over 215mm	m2	0.40	6.00	2.16	1.22	9.38
112mm	m	0.05	0.75	0.98	0.26	1.99
vertical, width over 215mm	m2	0.45	6.75	2.16	1.34	10.25
112mm	m	0.07	1.05	0.98	0.30	2.33
Pitch polymer damp proof course in gauged mortar (1:1:6)						
horizontal, width over 215mm	m2	0.40	6.00	2.22	1.23	9.45
112mm	m	0.05	0.75	1.12	0.28	2.15
vertical, width over 215mm	m2	0.45	6.75	2.22	1.35	10.32
112mm	m	0.07	1.05	1.12	0.33	2.50

	Unit	Labour	Hours	Mat'ls	O & P	Total
			£	£	£	£
Two courses of slates bedded in cement mortar (1:3)						
horizontal, width over 225mm	m2	0.87	13.05	17.45	4.58	35.08
112mm	m	0.33	4.95	2.32	1.09	8.36
vertical, width over 225mm	m2	0.95	14.25	17.45	4.76	36.46
112mm	m	0.35	5.25	2.32	1.14	8.71

PRECAST CONCRETE

Precast concrete copings
twice weathered and
twice throated, size

75 × 150 × 900mm	nr	0.30	4.50	7.12	1.74	13.36
75 × 300 × 900mm	nr	0.40	6.00	8.71	2.21	16.92

Precast concrete pier caps,
four times weathered, size

300 × 300 × 75mm	nr	1.00	15.00	7.04	3.31	25.35
450 × 450 × 75mm	nr	1.20	18.00	9.90	4.19	32.09

Kerbs and edgings

Excavate trench by hand
for kerb foundation

200 × 75mm	m	0.10	1.50	0.00	0.23	1.73
250 × 100mm	m	0.12	1.80	0.00	0.27	2.07
300 × 100mm	m	0.14	2.10	0.00	0.32	2.42
450 × 150mm	m	0.20	3.00	0.00	0.45	3.45
600 × 200mm	m	0.40	6.00	0.00	0.90	6.90

		Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Excavate curved trench by hand for kerb foundation							
250 × 100mm	m	0.12	1.80	0.00	0.27	2.07	
250 × 100mm	m	0.14	2.10	0.00	0.32	2.42	
300 × 100mm	m	0.16	2.40	0.00	0.36	2.76	
600 × 200mm	m	0.24	3.60	0.00	0.54	4.14	
600 × 200mm	m	0.44	6.60	0.00	0.99	7.59	
Site-mixed concrete in foundation for kerb size							
200 × 75mm	m	0.03	0.45	1.19	0.25	1.89	
250 × 100mm	m	0.04	0.60	1.98	0.39	2.97	
300 × 100mm	m	0.05	0.75	2.38	0.47	3.60	
450 × 150mm	m	0.18	2.70	5.15	1.18	9.03	
600 × 200mm	m	0.30	4.50	9.36	2.08	15.94	
Precast concrete kerbs, channels and edgings, jointed and pointed in cement mortar							
kerbs, straight							
127 × 254mm	m	0.40	6.00	6.68	1.90	14.58	
152 × 305mm	m	0.45	6.75	8.36	2.27	17.38	
kerbs, curved							
127 × 254mm	m	0.50	7.50	8.00	2.33	17.83	
152 × 305mm	m	0.55	8.25	12.42	3.10	23.77	
channels, straight							
127 × 254mm	m	0.40	6.00	7.91	2.09	16.00	

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
channels, curved 127 × 254mm	m	0.50	7.50	9.10	2.49	19.09
edgings, straight 51 × 152mm	m	0.30	4.50	3.47	1.20	9.17
51 × 203mm	m	0.30	4.50	4.15	1.30	9.95

SUB-BASES

Beds and bases compacting
in layers and grading

average thickness, 100mm						
granular fill	m2	0.10	1.50	3.31	0.72	5.53
sand	m2	0.12	1.80	3.14	0.74	5.68
hardcore	m2	0.13	1.95	3.02	0.75	5.72
average thickness, 150mm						
granular fill	m2	0.12	1.80	4.15	0.89	6.84
sand	m2	0.14	2.10	3.98	0.91	6.99
hardcore	m2	0.16	2.40	3.91	0.95	7.26
average thickness, 200mm						
granular fill	m2	0.14	2.10	5.38	1.12	8.60
sand	m2	0.16	2.40	4.79	1.08	8.27
hardcore	m2	0.18	2.70	4.71	1.11	8.52

	Unit	Labour	Hours	Mat'ls	O & P	Total
			£	£	£	£

BEDS AND PAVINGS**Preparatory work**

Excavate by hand to form
path, depth

100mm	m2	0.25	3.75	0.00	0.56	4.31
150mm	m2	0.35	5.25	0.00	0.79	6.04
200mm	m2	0.45	6.75	0.00	1.01	7.76
250mm	m2	0.60	9.00	0.00	1.35	10.35
300mm	m2	0.75	11.25	0.00	1.69	12.94

Hardcore bed compacted
in layers and blinded with
sand

100mm	m2	0.08	1.20	3.02	0.63	4.85
150mm	m2	0.10	1.50	3.91	0.81	6.22
200mm	m2	0.12	1.80	4.71	0.98	7.49

Concrete beds

Site-mixed concrete in beds

not exceeding 150mm thick	m3	2.80	42.00	87.33	19.40	148.73
150 to 450mm thick	m3	2.20	33.00	87.33	18.05	138.38

Formwork to sides of
concrete bases

not exceeding 250mm wide	m	0.65	9.75	2.05	1.77	13.57
250 to 500mm wide	m	0.90	13.50	3.39	2.53	19.42

	Unit	Labour	Hours	Mat'ls	O & P	Total
			£	£	£	£
Concrete beds (cont'd)						
Steel fabric reinforcement laid in concrete beds						
ref A142, 2.22kg/m2	m2	0.15	2.25	1.56	0.57	4.38
ref A193, 3.02kg/m2	m2	0.18	2.70	1.89	0.69	5.28
Expansion joint, impregnated fibre-base joint filler, formed joint						
12.5mm thick						
not exceeding 150mm	m	0.18	2.70	2.59	0.79	6.08
150 to 300mm wide	m	0.24	3.60	4.10	1.16	8.86
300 to 450mm wide	m	0.30	4.50	6.16	1.60	12.26
25mm thick						
not exceeding 150mm	m	0.20	3.00	3.68	1.00	7.68
150 to 300mm wide	m	0.26	3.90	5.41	1.40	10.71
300 to 450mm wide	m	0.32	4.80	8.37	1.98	15.15
Treat surfaces of concrete before setting						
tamping	m2	0.06	0.90	0.00	0.14	1.04
floating	m2	0.10	1.50	0.00	0.23	1.73
trowelling	m2	0.15	2.25	0.00	0.34	2.59
Granular pavings						
Washed pit gravel, 19mm, bed thickness						
50mm	m2	0.06	0.90	2.37	0.49	3.76
75mm	m2	0.08	1.20	3.49	0.70	5.39

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Washed pit gravel, 38mm, bed thickness						
50mm	m2	0.06	0.90	2.19	0.46	3.55
75mm	m2	0.08	1.20	3.37	0.69	5.26
Hoggin bed laid on hard- core, bed thickness						
100mm	m2	0.14	2.10	2.55	0.70	5.35
150mm	m2	0.18	2.70	3.86	0.98	7.54
200mm	m2	0.22	3.30	4.65	1.19	9.14
Bark laid on prepared surfaces, bed thickness						
100mm	m2	0.05	0.75	2.39	0.47	3.61
Impregnated softwood edging boards with 38 × 38 × 225mm pegs at 1200mm centres						
38 × 100mm	m2	0.05	0.75	2.22	0.45	3.42
38 × 150mm	m2	0.07	1.05	2.58	0.54	4.17

Brick/block pavings

Brick paving, £250 per
1000, 215 × 103 × 65mm,
laid to falls and cross falls
bedding in cement mortar
15mm thick

straight joints both ways						
bricks laid flat	m2	1.00	15.00	25.77	6.12	46.89
bricks laid on edge	m2	1.25	18.75	39.16	8.69	66.60

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
herringbone pattern						
bricks laid flat	m2	1.25	18.75	25.77	6.68	51.20
bricks laid on edge	m2	1.50	22.50	39.16	9.25	70.91
Brick paving, £350 per 1000, 215 × 103 × 65mm, laid to falls and cross falls bedding in cement mortar 15mm thick						
straight joints both ways						
bricks laid flat	m2	1.00	15.00	30.87	6.88	52.75
bricks laid on edge	m2	1.25	18.75	44.90	9.55	73.20
herringbone pattern						
bricks laid flat	m2	1.25	18.75	30.87	7.44	57.06
bricks laid on edge	m2	1.50	22.50	44.90	10.11	77.51
Brick paving, £500 per 1000, 215 × 103 × 65mm, laid to falls and cross falls bedding in cement mortar 15mm thick						
straight joints both ways						
bricks laid flat	m2	1.00	15.00	37.80	7.92	60.72
bricks laid on edge	m2	1.25	18.75	51.81	10.58	81.14
herringbone pattern						
bricks laid flat	m2	1.25	18.75	37.80	8.48	65.03
bricks laid on edge	m2	1.50	22.50	51.11	11.04	84.65

Unit	Labour	Hours	Mat'ls	O & P	Total
		£	£	£	£

Precast concrete pavings

Precast concrete paving
flags, spot bedded in
cement mortar, straight
both ways, jointing in
cement mortar brushed in

natural colour

450 × 450 × 50mm	m2	0.55	8.25	16.81	3.76	28.82
450 × 600 × 50mm	m2	0.55	8.25	13.54	3.27	25.06
600 × 600 × 50mm	m2	0.50	7.50	11.34	2.83	21.67
600 × 900 × 50mm	m2	0.45	6.75	10.60	2.60	19.95

coloured

450 × 450 × 50mm	m2	0.55	8.25	20.38	4.29	32.92
450 × 600 × 50mm	m2	0.55	8.25	17.11	3.80	29.16
600 × 600 × 50mm	m2	0.50	7.50	15.82	3.50	26.82
600 × 900 × 50mm	m2	0.45	6.75	13.98	3.11	23.84

Reconstituted York
stone paving flags,
spot bedded in cement
mortar, straight both ways,
jointing in cement mortar
brushed in, 45mm thick,
size

300 x 300mm	m2	1.00	15.00	28.89	6.58	50.47
300 x 450mm	m2	0.80	12.00	27.45	5.92	45.37
300 x 600mm	m2	0.60	9.00	26.50	5.33	40.83
450 x 450mm	m2	0.55	8.25	24.99	4.99	38.23
600 x 600mm	m2	0.50	7.50	25.81	5.00	38.31

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
York stone paving flags spot bedded in cement mortar, straight both ways, jointing in cement mortar brushed in						
50mm thick						
cut to size	m2	0.80	12.00	95.52	16.13	123.65
random sizes	m2	0.90	13.50	79.90	14.01	107.41
63mm thick						
cut to size	m2	0.85	12.75	105.11	17.68	135.54
random sizes	m2	0.95	14.25	89.31	15.53	119.09
75mm thick						
cut to size	m2	0.90	13.50	118.77	19.84	152.11
random sizes	m2	1.00	15.00	99.90	17.24	132.14
Natural granite setts bedded in cement mortar, size 100 × 100 × 150mm						
	m2	2.75	41.25	35.82	11.56	88.63
Concrete setts bedded in cement mortar, size						
150 × 150 × 80mm	m2	2.75	41.25	33.87	11.27	86.39
200 × 150 × 80mm	m2	2.50	37.50	33.87	10.71	82.08
Concrete paviors, bedded in sand, with sand brushed in, size						
200 × 100 × 60mm	m2	1.00	15.00	11.55	3.98	30.53
200 × 100 × 80mm	m2	1.00	15.00	12.80	4.17	31.97

Unit	Labour	Hours	Mat'ls	O & P	Total
		£	£	£	£

FENCING**Fencing posts**

Galvanised steel posts,
size 40 × 40 × 5mm,
driven into ground

900mm high	nr	0.05	0.75	1.83	0.39	2.97
1200mm high	nr	0.05	0.75	2.18	0.44	3.37
1400mm high	nr	0.10	1.50	2.48	0.60	4.58
1800mm high	nr	0.15	2.25	3.08	0.80	6.13
2400mm high	nr	0.15	2.25	3.49	0.86	6.60

Galvanised steel posts,
size 40 × 40 × 5mm,
with one strut, set in
concrete

900mm high	nr	0.20	3.00	20.98	3.60	27.58
1200mm high	nr	0.20	3.00	24.77	4.17	31.94
1400mm high	nr	0.25	3.75	27.90	4.75	36.40
1800mm high	nr	0.30	4.50	31.87	5.46	41.83
2400mm high	nr	0.30	4.50	36.94	6.22	47.66

Galvanised steel posts,
size 40 × 40 × 5mm,
with two struts, driven
into ground

900mm high	nr	0.30	4.50	39.51	6.60	50.61
1200mm high	nr	0.30	4.50	43.31	7.17	54.98
1400mm high	nr	0.35	5.25	45.90	7.67	58.82
1800mm high	nr	0.40	6.00	49.08	8.26	63.34
2400mm high	nr	0.40	6.00	55.95	9.29	71.24

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
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Precast concrete posts
size 100 × 100mm, set
in concrete

900mm high	nr	0.25	3.75	20.98	3.71	28.44
1200mm high	nr	0.25	3.75	24.77	4.28	32.80
1400mm high	nr	0.30	4.50	27.90	4.86	37.26
1800mm high	nr	0.35	5.25	31.87	5.57	42.69
2400mm high	nr	0.35	5.25	36.94	6.33	48.52

Precast concrete posts
size 100 × 100mm, with
one strut, set in concrete

900mm high	nr	0.40	6.00	46.17	7.83	60.00
1200mm high	nr	0.40	6.00	49.97	8.40	64.37
1400mm high	nr	0.45	6.75	59.14	9.88	75.77
1800mm high	nr	0.55	8.25	63.17	10.71	82.13
2400mm high	nr	0.55	8.25	83.04	13.69	104.98

Precast concrete posts
size 100 × 100mm, with
two struts, set in concrete

900mm high	nr	0.50	7.50	63.61	10.67	81.78
1200mm high	nr	0.50	7.50	68.42	11.39	87.31
1400mm high	nr	0.55	8.25	78.34	12.99	99.58
1800mm high	nr	0.60	9.00	90.47	14.92	114.39
2400mm high	nr	0.60	9.00	96.37	15.81	121.18

	Unit	Labour	Hours	Mat'ls	O & P	Total
			£	£	£	£

Chainlink fencing

Chainlink fencing,
galvanised steel mesh on
three line, wires fixed to
posts (not included)

900mm high	m	0.15	2.25	1.82	0.61	4.68
1200mm high	m	0.15	2.25	1.90	0.62	4.77
1400mm high	m	0.20	3.00	3.18	0.93	7.11
1800mm high	m	0.25	3.75	3.83	1.14	8.72
2400mm high	m	0.25	3.75	5.20	1.34	10.29

Chainlink fencing,
plastic coated steel mesh
on three line, wires fixed to
posts (not included)

900mm high	m	0.15	2.25	1.92	0.63	4.80
1200mm high	m	0.15	2.25	2.00	0.64	4.89
1400mm high	m	0.20	3.00	3.28	0.94	7.22
1800mm high	m	0.25	3.75	3.93	1.15	8.83
2400mm high	m	0.25	3.75	5.30	1.36	10.41

Chestnut fencing

Chestnut fencing with
pales at 75mm centres,
fixed to 75 mm posts at
3 metre centres driven
into ground

two line wire						
900mm high	m	0.25	3.75	4.52	1.24	9.51
1100mm high	m	0.30	4.50	4.78	1.39	10.67
1250mm high	m	0.35	5.25	5.07	1.55	11.87

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Chestnut fencing (cont'd)						
three line wire						
900mm high	m	0.25	3.75	4.83	1.29	9.87
1100mm high	m	0.30	4.50	4.99	1.42	10.91
1250mm high	m	0.35	5.25	5.23	1.57	12.05

Strained wire fencing

Strained wire fencing
fixed to concrete posts
(not included)

1000mm high, 3 wires	m	0.10	1.50	0.48	0.30	2.28
1200mm high, 3 wires	m	0.11	1.65	0.48	0.32	2.45
1500mm high, 4 wires	m	0.12	1.80	0.72	0.38	2.90

Barbed wire fencing

Barbed wire fencing
fixed to concrete posts
(not included)

1000mm high, 3 wires	m	0.14	2.10	0.61	0.41	3.12
1200mm high, 3 wires	m	0.16	2.40	0.72	0.47	3.59
1500mm high, 4 wires	m	0.18	2.70	0.84	0.53	4.07

Unit	Labour	Hours	Mat'ls	O & P	Total
		£	£	£	£

DRAINAGE

Excavate drain trench by hand, support sides, level and ram bottom of trench, backfill and consolidate with excavated material and and remove surplus to tip for pipes 100mm and 150mm diameter, average depth of trench

0.50m	m	1.20	18.00	0.00	2.70	20.70
0.75m	m	1.90	28.50	0.00	4.28	32.78
1.00m	m	2.50	37.50	0.00	5.63	43.13
1.25m	m	4.00	60.00	0.00	9.00	69.00
1.50m	m	5.00	75.00	0.00	11.25	86.25
1.75m	m	6.00	90.00	0.00	13.50	103.50
2.00m	m	7.20	108.00	0.00	16.20	124.20
2.25m	m	8.20	123.00	0.00	18.45	141.45
2.50m	m	9.50	142.50	0.00	21.38	163.88
2.75m	m	10.50	157.50	0.00	23.63	181.13
3.00m	m	12.00	180.00	0.00	27.00	207.00

Excavate drain trench by hand, support sides, level and ram bottom of trench, backfill and consolidate with excavated material and and remove surplus to tip for pipes 225mm diameter, average depth of trench

0.50m	m	1.30	19.50	0.00	2.93	22.43
0.75m	m	2.10	31.50	0.00	4.73	36.23
1.00m	m	2.70	40.50	0.00	6.08	46.58

		Unit	Labour	Hours	Mat'ls	O & P	Total
				£	£	£	£
Excavate drain trench (cont'd)							
1.25m	m	4.30	64.50	0.00	9.68	74.18	
1.50m	m	5.40	81.00	0.00	12.15	93.15	
1.75m	m	6.60	99.00	0.00	14.85	113.85	
2.00m	m	7.10	106.50	0.00	15.98	122.48	
2.25m	m	9.00	135.00	0.00	20.25	155.25	
2.50m	m	10.20	153.00	0.00	22.95	175.95	
2.75m	m	11.30	169.50	0.00	25.43	194.93	
3.00m	m	12.80	192.00	0.00	28.80	220.80	

Extra for breaking up by hand

plain concrete 100mm thick	m2	0.90	13.50	0.00	2.03	15.53
reinforced concrete 100mm thick	m2	1.00	15.00	0.00	2.25	17.25
tarmacadam 75mm thick	m2	0.55	8.25	0.00	1.24	9.49
hardcore 100mm thick	m2	0.40	6.00	0.00	0.90	6.90
soft rock	m3	8.00	120.00	0.00	18.00	138.00
hard rock	m3	10.00	150.00	0.00	22.50	172.50

Sand bed in trench under pipe
100mm diameter, thickness

100mm	m	0.10	1.50	1.39	0.43	3.32
150mm	m	0.12	1.80	2.04	0.58	4.42

Sand bed in trench under pipe
150mm diameter, thickness

100mm	m	0.11	1.65	2.04	0.55	4.24
150mm	m	0.13	1.95	3.11	0.76	5.82

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Sand bed in trench under pipe 225mm diameter, thickness						
100mm	m	0.14	2.10	2.14	0.64	4.88
150mm	m	0.16	2.40	3.17	0.84	6.41
Granular filling in bed in trench under pipe 100mm diameter, thickness						
100mm	m	0.12	1.80	2.36	0.62	4.78
150mm	m	0.14	2.10	3.49	0.84	6.43
Granular filling in bed in trench under pipe 150mm diameter, thickness						
100mm	m	0.13	1.95	2.45	0.66	5.06
150mm	m	0.15	2.25	3.62	0.88	6.75
Granular filling in bed in trench under pipe 225mm diameter, thickness						
100mm	m	0.16	2.40	2.61	0.75	5.76
150mm	m	0.18	2.70	3.77	0.97	7.44
Concrete filling in bed in trench under pipe 100mm diameter, thickness						
100mm	m	0.24	3.60	4.46	1.21	9.27
150mm	m	0.28	4.20	6.64	1.63	12.47

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Concrete filling in bed in trench under pipe 150mm diameter, thickness						
100mm	m	0.26	3.90	5.24	1.37	10.51
150mm	m	0.30	4.50	7.81	1.85	14.16
Concrete filling in bed in trench under pipe 225mm diameter, thickness						
100mm	m	0.32	4.80	5.92	1.61	12.33
150mm	m	0.36	5.40	8.83	2.13	16.36
Concrete in bed and haunching to pipe, 100mm diameter, bed thickness						
100mm	m	0.48	7.20	5.92	1.97	15.09
150mm	m	0.56	8.40	8.83	2.58	19.81
Concrete in bed and haunching to pipe, 150mm diameter, bed thickness						
100mm	m	0.52	7.80	7.57	2.31	17.68
150mm	m	0.60	9.00	11.41	3.06	23.47
Concrete in bed and haunching to pipe, 225mm diameter, bed thickness						
100mm	m	0.60	9.00	10.19	2.88	22.07
150mm	m	0.66	9.90	15.19	3.76	28.85

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Granular filling in bed and surround to pipe, 100mm diameter, thickness						
100mm	m	0.36	5.40	3.16	1.28	9.84
150mm	m	0.42	6.30	4.69	1.65	12.64
Granular filling in bed and surround to pipe, 150mm diameter, thickness						
100mm	m	0.40	6.00	4.03	1.50	11.53
150mm	m	0.46	6.90	6.01	1.94	14.85
Granular filling in bed and surround to pipe, 225mm diameter, thickness						
100mm	m	0.44	6.60	4.17	1.62	12.39
150mm	m	0.50	7.50	6.21	2.06	15.77
Concrete filling in bed and surround to pipe, 100mm diameter, thickness						
100mm	m	0.72	10.80	15.33	3.92	30.05
150mm	m	0.84	12.60	23.20	5.37	41.17
Concrete filling in bed and surround to pipe, 150mm diameter, thickness						
100mm	m	0.72	10.80	19.90	4.61	35.31
150mm	m	0.84	12.60	29.79	6.36	48.75

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Concrete filling in bed and surround to pipe, 225mm diameter, thickness						
100mm	m	0.72	10.80	20.58	4.71	36.09
150mm	m	0.84	12.60	32.44	6.76	51.80
Hepworths' Supersleve vitrified clay drain pipes, spigot and socket joints with sealing rings, 100mm diameter						
laid in trenches	m	0.36	5.40	6.99	1.86	14.25
in lengths not exceeding 3m	m	0.54	8.10	6.99	2.26	17.35
bend	nr	0.30	4.50	9.58	2.11	16.19
rest bend	nr	0.30	4.50	14.79	2.89	22.18
single junction	nr	0.30	4.50	13.96	2.77	21.23
Hepworths' Supersleve vitrified clay drain pipes, spigot and socket joints with sealing rings, 150mm diameter						
laid in trenches	m	0.60	9.00	13.24	3.34	25.58
in lengths not exceeding 3m	m	0.40	6.00	13.24	2.89	22.13
bend	nr	0.30	4.50	13.21	2.66	20.37
rest bend	nr	0.30	4.50	17.05	3.23	24.78
single junction	nr	0.30	4.50	17.76	3.34	25.60

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Vitrified clay inlet gulley complete with grid and surrounded with concrete	nr	1.50	22.50	43.96	9.97	76.43
Vitrified clay back inlet gulley complete with grid and surrounded with concrete	nr	1.50	22.50	62.74	12.79	98.03
Vitrified clay paved area gulley complete with grid and surrounded with concrete	nr	1.50	22.50	50.97	11.02	84.49
Manholes						
Excavate by hand for manhole not exceeding						
1.0m deep	m3	4.00	60.00	0.00	9.00	69.00
1.5m deep	m3	4.50	67.50	0.00	10.13	77.63
2.0m deep	m3	5.60	84.00	0.00	12.60	96.60
Load surplus excavated material into barrows wheel 50m and deposit into skip	m3	2.20	33.00	0.00	4.95	37.95
Earthwork support not exceeding 2m between opposing faces, depth not exceeding						
1.0m deep	m2	0.35	5.25	2.17	1.11	8.53
2.0m deep	m2	0.40	6.00	2.49	1.27	9.76
4.0m deep	m2	0.45	6.75	2.80	1.43	10.98

	Unit	Labour	Hours	Mat'ls	O & P	Total
			£	£	£	£
Site-mixed concrete in base of manhole, thickness						
100-150mm	m3	2.00	30.00	96.21	18.93	145.14
150-300mm	m3	1.80	27.00	96.21	18.48	141.69
Site-mixed concrete in benching to manhole, average thickness 225mm						
	m3	6.00	90.00	96.21	27.93	214.14
Engineering bricks Class 'B' in cement mortar in walls of manhole						
	m2	4.80	72.00	62.40	20.16	154.56
Extra for fair face and flush pointing						
	m2	0.25	3.75	0.00	0.56	4.31
Build in ends of pipes to one brick wall and make good, pipe diameter						
100mm	nr	0.15	2.25	0.00	0.34	2.59
150mm	nr	0.19	2.84	0.00	0.43	3.26
Galvanised step iron built into brickwork						
	nr	0.20	3.00	5.94	1.34	10.28
Cast iron manhole cover, frame, bedded in cement mortar						
Grade A, light duty, size 600 × 450mm						
	nr	1.90	28.50	77.36	15.88	121.74
Grade B, medium duty, size 600 × 450mm						
	nr	2.00	30.00	123.89	23.08	176.97

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Best quality vitrified clay channels, bedded in cement mortar						
half-section straight main channel						
100mm diameter x 300mm	nr	0.75	11.25	3.27	2.18	16.70
100mm diameter x 600mm	nr	0.85	12.75	5.84	2.79	21.38
100mm diameter x 1000mm	nr	0.95	14.25	7.47	3.26	24.98
150mm diameter x 300mm	nr	0.75	11.25	5.02	2.44	18.71
150mm diameter x 600mm	nr	0.85	12.75	7.42	3.03	23.20
150mm diameter x 1000mm	nr	0.95	14.25	10.28	3.68	28.21
Half-section 90 degrees channel bend						
100mm	nr	0.30	4.50	6.25	1.61	12.36
150mm	nr	0.40	6.00	9.38	2.31	17.69
Three-quarter section 90° channel bend						
100mm	nr	1.20	18.00	13.08	4.66	35.74
150mm	nr	1.30	19.50	23.27	6.42	49.19

Unit	Labour	Hours	Mat'ls	O & P	Total
		£	£	£	£

Land drainage

Excavate trench 225mm
wide by hand, remove
excavated material, average
depth

500mm	m	0.35	5.25	0.00	0.79	6.04
750mm	m	0.50	7.50	0.00	1.13	8.63
1000mm	m	0.75	11.25	0.00	1.69	12.94

Excavate trench 300mm
wide by hand, remove
excavated material, average
depth

500mm	m	0.45	6.75	0.00	1.01	7.76
750mm	m	0.70	10.50	0.00	1.58	12.08
1000mm	m	0.90	13.50	0.00	2.03	15.53

Agricultural clay field
drain pipe, 300mm long,
laid butt jointed in trench,
diameter

75mm	m	0.11	1.65	2.99	0.70	5.34
100mm	m	0.12	1.80	5.02	1.02	7.84
150mm	m	0.14	2.10	9.57	1.75	13.42

Single junction

75mm	nr	0.06	0.90	10.53	1.71	13.14
100mm	nr	0.07	1.05	13.69	2.21	16.95
150mm	nr	0.08	1.20	16.88	2.71	20.79

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Flexible plastic perforated field drain pipe, diameter						
60mm	m	0.02	0.30	0.36	0.10	0.76
80mm	m	0.02	0.30	0.47	0.12	0.89
100mm	m	0.03	0.45	0.74	0.18	1.37
Single junction						
60 × 60mm	nr	0.06	0.90	1.68	0.39	2.97
60 × 80mm	nr	0.06	0.90	1.82	0.41	3.13
60 × 100mm	nr	0.06	0.90	1.86	0.41	3.17
80 × 80mm	nr	0.06	0.90	1.80	0.41	3.11
80 × 100mm	nr	0.06	0.90	1.93	0.42	3.25
Backfilling field trench with gravel, blinded with sand and replace with turf laid aside						
trench width 225mm						
depth 500mm	m	0.03	0.45	2.28	0.41	3.14
depth 750mm	m	0.03	0.45	3.33	0.57	4.35
depth 1000mm	m	0.03	0.45	4.35	0.72	5.52
trench width 300mm						
depth 500mm	m	0.03	0.45	3.09	0.53	4.07
depth 750mm	m	0.03	0.45	4.36	0.72	5.53
depth 1000mm	m	0.03	0.45	5.71	0.92	7.08

Part Three

GROUNDWORKS

Roads and sewers

House foundations

This Groundworks section covers work in small housing estates including roads, sewers and house foundations.

ROADS AND SEWERS

Where applicable the plant column includes the cost of the operator.

The following rates are based on excavating in firm ground. The following adjustments should be made for other conditions:

stiff clay + 50%
soft chalk + 100%

Remove undergrowth and site vegetation	m2	0.17	-	0.03	0.20
Cut down trees, grub up roots and remove					
girth, 600–1500mm	nr	200.00	-	30.00	230.00
girth, 1500–3000mm	nr	527.60	-	79.14	606.74

	Unit	Plant £	Mat'ls £	O & P £	Total £	
Cut down hedge, grub up roots and remove						
height, 1500mm	m	17.36	-	2.60	19.96	
height, 3000mm	m	30.40	-	4.56	34.96	
Excavate topsoil or turf and lay aside for re-use						
150mm thick	m2	0.33	-	0.05	0.38	
200mm thick	m2	0.44	-	0.07	0.51	
250mm thick	m2	0.54	-	0.08	0.62	
Excavate to reduce levels depth not exceeding						
250mm thick	m3	1.62	-	0.24	1.86	
500mm thick	m3	1.52	-	0.23	1.75	
Extra for excavating through						
rock	m3	71.65	-	10.75	82.40	
concrete	m3	60.80	-	9.12	69.92	
brickwork	m3	47.76	-	7.16	54.92	
	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Excavate trench for kerb foundation						
200 x 75mm thick	m	0.10	1.50	-	0.23	1.73
250 x 100mm thick	m	0.12	1.80	-	0.27	2.07
300 x 100mm thick	m	0.14	2.10	-	0.32	2.42
450 x 500mm thick	m	0.20	3.00	-	0.45	3.45

	Unit	Plant £	Mat'ls £	O & P £	Total £
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Disposal by machine

Load surplus excavated
material into lorries
and cart away to tip

distance, 10km	m3	17.96	-	2.69	20.65
distance, 15km	m3	19.54	-	2.93	22.47

Filling by machine

Surplus excavated material
deposited and compacted
in layers

over 250mm thick	m3	7.84	-	1.18	9.02
100mm thick	m2	1.20	-	0.18	1.38
150mm thick	m2	1.35	-	0.20	1.55
200mm thick	m2	1.50	-	0.23	1.73

Imported sand deposited
and compacted in layers

over 250mm thick	m3	7.84	33.91	6.26	48.01
100mm thick	m2	1.20	3.39	0.69	5.28
150mm thick	m2	1.35	5.08	0.96	7.39
200mm thick	m2	1.50	7.78	1.39	10.67

Imported hardcore
deposited and compacted
in layers

over 250mm thick	m3	7.84	20.02	4.18	32.04
100mm thick	m2	1.20	2.02	0.48	3.70
150mm thick	m2	1.35	3.03	0.66	5.04
200mm thick	m2	1.50	4.04	0.83	6.37

	Unit	Plant £	Mat'ls £	O & P £	Total £
Imported topsoil deposited and compacted in layers					
over 250mm thick	m3	7.84	15.20	3.46	26.50
100mm thick	m2	1.20	1.52	0.41	3.13
150mm thick	m2	1.35	2.28	0.54	4.17
200mm thick	m2	1.50	3.04	0.68	5.22

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Precast concrete kerbs, splayed or battered, laid straight or curved to radius exceeding 12m						
125 x 150mm	m	0.40	6.00	10.12	2.42	18.54
125 x 150mm	m	0.45	6.75	11.89	2.80	21.44
150 x 305mm	m	0.50	7.50	13.25	3.11	23.86

Precast concrete kerbs, splayed or battered, laid straight or curved to radius not exceeding 12m						
125 x 150mm	m	0.40	6.00	10.12	2.42	18.54
125 x 150mm	m	0.45	6.75	11.89	2.80	21.44
150 x 305mm	m	0.50	7.50	13.25	3.11	23.86

	Unit	Plant £	Mat'ls £	O & P £	Total £
Granular material in sub-base to road, depth					
75mm	m2	1.20	1.07	0.34	2.61
100mm	m2	1.40	1.42	0.42	3.24
150mm	m2	1.80	2.13	0.59	4.52
200mm	m2	2.40	2.84	0.79	6.03
250mm	m2	2.60	3.56	0.92	7.08
Lean concrete in road base, depth					
100mm	m2	1.40	7.55	1.34	10.29
150mm	m2	1.80	11.33	1.97	15.10
200mm	m2	2.40	15.10	2.63	20.13
250mm	m2	2.60	18.88	3.22	24.70
Dense bitumen macadam road base, depth					
75mm	m2	4.10	4.74	1.33	10.17
100mm	m2	6.50	6.32	1.92	14.74
150mm	m2	1.80	2.13	0.59	4.52
200mm	m2	2.40	2.84	0.79	6.03
Rolled asphalt base course, depth					
50mm	m2	5.61	3.55	1.37	10.53
75mm	m2	8.36	4.92	1.99	15.27

	Unit	Plant £	Mat'ls £	O & P £	Total £
Dense tar surfacing wearing course, depth					
25mm	m2	2.94	2.32	0.79	6.05
50mm	m2	4.22	3.88	1.22	9.32
Cold asphalt wearing course, depth					
15mm	m2	4.21	1.30	0.83	6.34
25mm	m2	5.22	2.04	1.09	8.35
Rolled asphalt wearing course, depth					
30mm	m2	4.21	2.93	1.07	8.21
50mm	m2	5.22	4.70	1.49	11.41
Concrete, designed mix grade 30, 20 mm aggregate, depth					
100mm	m2	3.84	8.20	1.81	13.85
150mm	m2	7.60	12.30	2.99	22.89
200mm	m2	9.77	16.40	3.93	30.10
250mm	m2	10.44	20.48	4.64	35.56
300mm	m2	11.63	24.58	5.43	41.64
400mm	m2	13.28	32.77	6.91	52.96
Steel fabric reinforcement to BS 4483					
ref A142, weight 2.26kg/m2	m2	2.90	1.36	0.64	4.90
ref A193, weight 3.02kg/m2	m2	4.88	1.78	1.00	7.66
ref C503, weight 4.34kg/m2	m2	6.70	2.72	1.41	10.83
ref C636, weight 5.55kg/m2	m2	7.65	3.44	1.66	12.75

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Waterproof membrane below concrete slab						
plastic sheeting, 250 micron	m2	0.10	1.50	0.50	0.30	2.30
plastic sheeting, 500 micron	m2	0.10	1.50	0.50	0.30	2.30
Longitudinal joints, depth						
150mm	m	0.16	2.40	27.10	4.43	33.93
200mm	m	0.16	2.40	29.54	4.79	36.73
250mm	m	0.16	2.40	32.88	5.29	40.57
300mm	m	0.16	2.40	32.47	5.23	40.10
Expansion joints, depth						
150mm	m	0.16	2.40	33.56	5.39	41.35
200mm	m	0.16	2.40	36.68	5.86	44.94
250mm	m	0.16	2.40	39.00	6.21	47.61
300mm	m	0.16	2.40	42.37	6.72	51.49
Contraction joints, depth						
150mm	m	0.16	2.40	17.55	2.99	22.94
200mm	m	0.16	2.40	19.64	3.31	25.35
250mm	m	0.16	2.40	22.57	3.75	28.72
300mm	m	0.16	2.40	25.67	4.21	32.28
Construction joints, depth						
150mm	m	0.16	2.40	16.22	2.79	21.41
200mm	m	0.16	2.40	17.88	3.04	23.32
250mm	m	0.16	2.40	20.22	3.39	26.01
300mm	m	0.16	2.40	20.88	3.49	26.77

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Vitrified clay road gully surrounded with concrete, two courses of brickwork, and cast iron grating						
450 x 750mm	m	1.20	18.00	128.36	21.95	168.31
450 x 900mm	m	1.20	18.00	132.55	22.58	173.13
450 x 1050mm	m	1.20	18.00	138.97	23.55	180.52
450 x 915mm	m	1.20	18.00	370.55	58.28	446.83

Concrete road gully
surrounded with concrete,
two courses of brickwork,
and cast iron grating

450 x 750mm	m	1.20	18.00	136.46	23.17	177.63
450 x 900mm	m	1.20	18.00	128.69	22.00	168.69
450 x 1050mm	m	1.20	18.00	133.53	22.73	174.26
450 x 915mm	m	1.20	18.00	145.65	24.55	188.20

Unit	Plant £	Mat'ls £	O & P £	Total £
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Concrete pipes, Class L,
with flexible joints,
nominal bore

300mm, depth

1.5–2m	m	34.55	13.60	7.22	55.37
2–2.5m	m	36.56	13.60	7.52	57.68
2.5–3m	m	38.14	13.60	7.76	59.50

	Unit	Plant £	Mat'ls £	O & P £	Total £
450mm, depth					
1.5–2m	m	38.14	20.34	8.77	67.25
2–2.5m	m	40.22	20.34	9.08	69.64
2.5–3m	m	44.85	20.34	9.78	74.97
600mm, depth					
1.5–2m	m	58.76	32.20	13.64	104.60
2–2.5m	m	66.00	32.20	14.73	112.93
2.5–3m	m	73.20	32.20	15.81	121.21
Concrete pipe fittings, nominal bore					
300mm					
bends, 45 degrees	nr	11.58	114.51	18.91	145.00
junctions	nr	14.38	88.49	15.43	118.30
450mm					
bends, 45 degrees	nr	14.46	168.55	27.45	210.46
junctions	nr	20.32	114.56	20.23	155.11
600mm					
bends, 45 degrees	nr	18.37	384.25	60.39	463.01
junctions	nr	28.57	114.56	21.47	164.60

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
HOUSE FOUNDATIONS						
Hand excavation						
Excavate topsoil						
150mm thick	m2	0.35	5.25	-	0.79	6.04
200mm thick	m2	0.45	6.75	-	1.01	7.76
250mm thick	m2	0.60	9.00	-	1.35	10.35
Excavate to reduce levels, levels, depth not exceeding						
0.75m	m3	2.20	33.00	-	4.95	37.95
1.00m	m3	2.40	36.00	-	5.40	41.40
1.50m	m3	2.80	42.00	-	6.30	48.30
2.00m	m3	3.20	48.00	-	7.20	55.20
Excavate trenches 450mm wide,depth not exceeding						
0.75m	m3	2.50	37.50	-	5.63	43.13
1.00m	m3	2.70	40.50	-	6.08	46.58
1.50m	m3	3.00	45.00	-	6.75	51.75
2.00m	m3	3.40	51.00	-	7.65	58.65
Extra for excavating through						
rock	m3	10.00	150.00	-	22.50	172.50
concrete	m3	8.00	120.00	-	18.00	138.00
reinforced concrete	m3	9.00	135.00	-	20.25	155.25
brickwork	m3	6.00	90.00	-	13.50	103.50

	Unit	Plant £	Mat'ls £	O & P £	Total £
Excavate by machine					
Excavate topsoil					
150mm thick	m2	1.90	-	0.29	2.19
200mm thick	m2	2.55	-	0.38	2.93
250mm thick	m2	3.34	-	0.50	3.84
Excavate to reduce levels, levels, depth not exceeding					
0.75m	m3	2.70	-	0.41	3.11
1.00m	m3	2.72	-	0.41	3.13
1.50m	m3	3.22	-	0.48	3.70
2.00m	m3	3.64	-	0.55	4.19
Excavate trenches 450mm wide, depth not exceeding					
0.75m	m3	8.25	-	1.24	9.49
1.00m	m3	8.86	-	1.33	10.19
1.50m	m3	9.67	-	1.45	11.12
2.00m	m3	10.55	-	1.58	12.13
Extra for excavating through					
rock	m3	78.00	-	11.70	89.70
concrete	m3	58.00	-	8.70	66.70
reinforced concrete	m3	65.21	-	9.78	74.99
brickwork	m3	52.32	-	7.85	60.17

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Earthwork support						
Earthwork support not exceeding 2m between opposite faces, depth not exceeding 1m						
firm ground	m2	0.15	2.25	1.57	0.57	4.39
loose ground	m2	0.85	12.75	3.02	2.37	18.14
sand	m2	1.10	16.50	3.58	3.01	23.09
Earthwork support not exceeding 2m between opposite faces, depth not exceeding 2m						
firm ground	m2	0.18	2.70	1.57	0.64	4.91
loose ground	m2	0.90	13.50	3.02	2.48	19.00
sand	m2	1.20	18.00	3.58	3.24	24.82
Earthwork support not exceeding 2m between opposite faces, depth not exceeding 4m						
firm ground	m2	0.22	3.30	1.57	0.73	5.60
loose ground	m2	0.95	14.25	3.02	2.59	19.86
sand	m2	1.30	19.50	3.58	3.46	26.54

Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
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Disposal by hand

Load surplus excavated
material into barrows,
wheel and deposit in
temporary spoil heaps,
average distance

15m	m3	1.25	18.75	-	2.81	21.56
25m	m3	1.45	21.75	-	3.26	25.01
50m	m3	1.70	25.50	-	3.83	29.33

Load surplus excavated
material into barrows,
wheel and spread
over site, average
distance

15m	m3	1.65	24.75	-	3.71	28.46
25m	m3	1.85	27.75	-	4.16	31.91
50m	m3	2.00	30.00	-	4.50	34.50

Load surplus excavated
material into barrows,
wheel and deposit
in skips or lorries,
average distance

15m	m3	1.20	18.00	-	2.70	20.70
25m	m3	1.40	21.00	-	3.15	24.15
50m	m3	1.65	24.75	-	3.71	28.46

	Unit	Plant £	Mat'ls £	O & P £	Total £
Disposal by machine					
Load and deposit in temporary spoil heaps, average distance					
15m	m3	2.45	-	0.37	2.82
25m	m3	2.98	-	0.45	3.43
50m	m3	4.92	-	0.74	5.66
Load and spread over site, average distance					
15m	m3	3.10	-	0.47	3.57
25m	m3	3.84	-	0.58	4.42
50m	m3	4.38	-	0.66	5.04
Load and deposit in skips or lorries, average distance					
15m	m3	2.16	-	0.32	2.48
25m	m3	2.65	-	0.40	3.05
50m	m3	4.44	-	0.67	5.11

Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
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Filling by hand

Surplus excavated
material deposited and
compacting in layers

over 250mm thick	m3	0.80	12.00	-	1.80	13.80
100mm thick	m2	0.10	1.50	-	0.23	1.73
150mm thick	m2	0.15	2.25	-	0.34	2.59
200mm thick	m2	0.20	3.00	-	0.45	3.45

Imported sand deposited
and compacting in layers

over 250mm thick	m3	0.80	12.00	24.56	5.48	42.04
100mm thick	m2	0.10	1.50	2.45	0.59	4.54
150mm thick	m2	0.15	2.25	3.68	0.89	6.82
200mm thick	m2	0.20	3.00	4.90	1.19	9.09

Imported hardcore
deposited and
compacting in layers

over 250mm thick	m3	0.80	12.00	22.46	5.17	39.63
100mm thick	m2	0.10	1.50	2.24	0.56	4.30
150mm thick	m2	0.15	2.25	3.36	0.84	6.45
200mm thick	m2	0.20	3.00	4.48	1.12	8.60

	Unit	Plant £	Mat'ls £	O & P £	Total £
Filling by machine					
Surplus excavated material deposited and compacting in layers					
over 250mm thick	m3	5.08	-	0.76	5.84
100mm thick	m2	0.78	-	0.12	0.90
150mm thick	m2	1.03	-	0.15	1.18
200mm thick	m2	1.22	-	0.18	1.40
Imported sand deposited and compacting in layers					
over 250mm thick	m3	5.08	32.44	5.63	43.15
100mm thick	m2	0.78	3.24	0.60	4.62
150mm thick	m2	1.03	4.86	0.88	6.77
200mm thick	m2	1.22	6.48	1.16	8.86
Imported hardcore deposited and compacting in layers					
over 250mm thick	m3	5.08	21.24	3.95	30.27
100mm thick	m2	0.78	2.12	0.44	3.34
150mm thick	m2	1.03	3.18	0.63	4.84
200mm thick	m2	1.22	4.24	0.82	6.28
Surface treatments					
Level and compact bottom of excavation with vibrating roller					
	m2	1.28	-	0.19	1.47
Blind filling surfaces with sand 50mm thick					
	m2	1.24	1.16	0.36	2.76

Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
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Concrete work

Ready mix concrete
1:3:6 in foundation
trenches, thickness

150 to 300mm	m3	0.90	13.50	81.25	14.21	108.96
150 to 300mm	m3	0.70	10.50	81.25	13.76	105.51
300 to 450mm	m3	0.50	7.50	81.25	13.31	102.06

Ready mix concrete
1:2:4 in ground floor
slabs, thickness

100 to 300mm	m3	1.10	16.50	83.24	14.96	114.70
300 to 450mm	m3	1.00	15.00	83.24	14.74	112.98

Brickwork

Common bricks basic
price £140 per 1,000
in cement mortar

half brick thick	m2	0.65	31.27	11.03	6.34	48.64
one brick thick	m2	1.10	52.91	22.90	11.37	87.18

Facing bricks basic
price £400 per 1,000
in cement mortar

half brick thick	m2	0.85	40.89	27.41	10.24	78.54
one brick thick	m2	1.10	52.91	55.41	16.25	124.57

	Unit	Labour	Hours £	Mat'ls £	O & P £	Total £
Blockwork						
Dense concrete blockwork in cement mortar						
100mm thick	m2	0.40	19.24	9.08	4.25	32.57
140mm thick	m2	0.46	22.13	12.24	5.15	39.52

	Unit	Quantity	Rate	Total £
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The following are typical costs for the construction of the the foundations for three different sized houses. The figures have been rounded off.

Ground floor area 63m2

Excavate topsoil 150mm deep by machine	m2	63	2.19	138
Excavate to reduce levels 0.75m deep	m3	47	3.11	146
Excavate trench 450mm wide not exceeding 1m deep	m3	18	10.19	<u>183</u>
Carried forward				468

	Unit	Quantity	Rate	Total £
Brought forward				468
Earthwork support not exceeding 2m between faces not exceeding 1m deep	m3	80	4.91	393
Load and deposit surplus excavated material in lorries, average distance 15m	m3	47	2.48	117
Level and compact bottom of trench	m2	18	1.47	26
Ready mix concrete 1:3:6 in foundations 150 to 300mm deep	m3	4	108.96	436
Ready mix concrete 1:2:4 in floor slab 150 to 300mm deep	m3	9	114.70	1,032
Half brick wall in common bricks £140 per thousand in leaf of cavity wall in cement mortar	m2	24	48.64	1,167
Half brick wall in facing bricks £400 per thousand in leaf of cavity wall in cement mortar	m2	6	78.54	<u>471</u>
Carried forward				4,110

	Unit	Quantity	Rate	Total £
Brought forward				4,110
Dense concrete blockwork in cavity wall in cement mortar	m2	30	32.57	<u>977</u>
Total				<u>5,087</u>
Ground floor area 102m2				
Excavate topsoil 150mm deep by machine	m2	102	2.19	223
Excavate to reduce levels 0.75m deep	m3	76	3.11	236
Excavate trench 450mm wide not exceeding 1m deep	m3	26	10.19	265
Earthwork support not exceeding 2m between faces not exceeding 1m deep	m3	114	4.91	560
Load and deposit surplus excavated material in lorries, average distance 15m	m3	76	2.48	188
Level and compact bottom of trench	m2	18	1.47	<u>26</u>
Carried forward				1499

	Unit	Quantity	Rate	Total £
Brought forward				1,499
Ready mix concrete 1:3:6 in foundations 150 to 300mm deep	m3	6	108.96	654
Ready mix concrete 1:2:4 in floor slab 150 to 300mm deep	m3	15	114.70	1,721
Half brick wall in common bricks £140 per thousand in leaf of cavity wall in cement mortar	m2	34	48.64	1,654
Half brick wall in facing bricks £400 per thousand in leaf of cavity wall in cement mortar	m2	9	78.54	707
Dense concrete blockwork in cavity wall in cement mortar	m2	42	32.57	<u>1,368</u>
Total				<u>7,602</u>
Ground floor area 250m2				
Excavate topsoil 150mm deep by machine	m2	250	2.19	548
Excavate to reduce levels 0.75m deep	m3	188	3.11	<u>585</u>
Carried forward				1132

	Unit	Quantity	Rate	Total £
Brought forward				1,132
Excavate trench 450mm wide not exceeding 1m deep	m3	36	10.19	367
Earthwork support not exceeding 2m between faces not exceeding 1m deep	m3	158	4.91	776
Load and deposit surplus excavated material in lorries, average distance 15m	m3	188	2.48	466
Level and compact bottom of trench	m2	36	1.47	53
Ready mix concrete 1:3:6 in foundations 150 to 300mm deep	m3	8	108.96	872
Ready mix concrete 1:2:4 in floor slab 150 to 300mm deep	m3	38	114.70	4,359
Half brick wall in common bricks £140 per thousand in leaf of cavity wall in cement mortar	m2	47	48.64	<u>2,286</u>
Carried forward				10,310

	Unit	Quantity	Rate	Total £
Brought forward				10,310
Half brick wall in facing bricks £400 per thousand in leaf of cavity wall in cement mortar	m2	12	78.54	942
Dense concrete blockwork in cavity wall in cement mortar	m2	38	32.57	<u>1,238</u>
Total				<u>12,490</u>

Part Four

APPROXIMATE ESTIMATING

Brick walling

Masonry

Kerbs and edgings

Beds and pavings

Drainage

	Unit	Rate £
BRICK WALLING		
Excavate trench, lay concrete foundation, build wall 1m high in common bricks (basic price £140 per 1000) in cement mortar (1:3), stretcher bond		
half brick thick	m	82.00
half brick thick, curved	m	96.00
one brick thick	m	120.00
one thick, curved	m	134.00
one and a half brick thick	m	150.00
two brick thick	m	175.00
Excavate trench, lay concrete foundation, build wall 1m high in common bricks (basic price £140 per 1000) in cement mortar (1:3), stretcher bond, facework one side		
half brick thick	m	84.00
half brick thick, curved	m	98.00
one brick thick	m	122.00
one thick, curved	m	136.00
one and a half brick thick	m	152.00
two brick thick	m	177.00
Excavate trench, lay concrete foundation, build wall 1m high in common bricks (basic price £140 per 1000) in cement mortar (1:3), stretcher bond, facework both sides		
half brick thick	m	86.00
half brick thick, curved	m	100.00

	Unit	Rate £
Brick walling (cont'd)		
one brick thick	m	124.00
one thick, curved	m	138.00
one and a half brick thick	m	154.00
two brick thick	m	180.00
Excavate trench, lay concrete foundation, build wall 1m high in common bricks (basic price £200 per 1000) in cement mortar (1:3), stretcher bond		
half brick thick	m	88.00
half brick thick, curved	m	102.00
one brick thick	m	130.00
one thick, curved	m	144.00
one and a half brick thick	m	168.00
two brick thick	m	204.00
Excavate trench, lay concrete foundation, build wall 1m high in common bricks (basic price £200 per 1000) in cement mortar (1:3), stretcher bond, facework one side		
half brick thick	m	90.00
half brick thick, curved	m	104.00
one brick thick	m	132.00
one thick, curved	m	146.00
one and a half brick thick	m	170.00
two brick thick	m	206.00

	Unit	Rate £
Excavate trench, lay concrete foundation, build wall 1m high in common bricks (basic price £200 per 1000) in cement mortar (1:3), stretcher bond, facework both sides		
half brick thick	m	92.00
half brick thick, curved	m	106.00
one brick thick	m	134.00
one thick, curved	m	148.00
one and a half brick thick	m	172.00
two brick thick	m	208.00
Excavate trench, lay concrete foundation, build wall 1m high in common bricks (basic price £250 per 1000) in cement mortar (1:3), stretcher bond		
half brick thick	m	94.00
half brick thick, curved	m	108.00
one brick thick	m	150.00
one thick, curved	m	154.00
one and a half brick thick	m	186.00
two brick thick	m	210.00
Excavate trench, lay concrete foundation, build wall 1m high in common bricks (basic price £250 per 1000) in cement mortar (1:3), stretcher bond, facework one side		
half brick thick	m	96.00
half brick thick, curved	m	110.00
one brick thick	m	152.00
one thick, curved	m	156.00

	Unit	Rate £
Brick walling (cont'd)		
one and a half brick thick	m	188.00
two brick thick	m	212.00
Excavate trench, lay concrete foundation, build wall 1m high in common bricks (basic price £350 per 1000) in cement mortar (1:3), stretcher bond, facework one side		
half brick thick	m	104.00
half brick thick, curved	m	118.00
one brick thick	m	152.00
one thick, curved	m	166.00
one and a half brick thick	m	190.00
two brick thick	m	215.00
Excavate trench, lay concrete foundation, build wall 1m high in facing bricks (basic price £350 per 1000) in cement mortar (1:3), English garden wall bond, facework both sides		
half brick thick	m	108.00
half brick thick, curved	m	122.00
one brick thick	m	156.00
one thick, curved	m	170.00
one and a half brick thick	m	194.00
two brick thick	m	220.00
Excavate trench, lay concrete foundation, build wall 1m high in facing bricks (basic price £500 per 1000) in cement mortar (1:3), English garden wall bond, facework one side		

	Unit	Rate £
half brick thick	m	118.00
half brick thick, curved	m	132.00
one brick thick	m	170.00
one thick, curved	m	184.00
one and a half brick thick	m	240.00
two brick thick	m	264.00
Excavate trench, lay concrete foundation, build wall 1m high in facing bricks (basic price £500 per 1000) in cement mortar (1:3), English garden wall bond, facework both sides		
half brick thick	m	120.00
half brick thick, curved	m	134.00
one brick thick	m	172.00
one thick, curved	m	186.00
one and a half brick thick	m	242.00
two brick thick	m	260.00
Excavate trench, lay concrete foundation, build wall 1m high in facing bricks (basic price £250 per 1000) in cement mortar (1:3), Flemish bond, facework one side		
half brick thick	m	100.00
half brick thick, curved	m	114.00
one brick thick	m	166.00
one thick, curved	m	180.00

	Unit	Rate £
Brick walling (cont'd)		
Excavate trench, lay concrete foundation, build wall 1m high in facing bricks (basic price £250 per 1000) in cement mortar (1:3), Flemish bond, facework both sides		
half brick thick	m	102.00
half brick thick, curved	m	116.00
one brick thick	m	168.00
one thick, curved	m	182.00
Excavate trench, lay concrete foundation, build wall 1m high in facing bricks (basic price £350 per 1000) in cement mortar (1:3), Flemish bond, facework one side		
half brick thick	m	108.00
half brick thick, curved	m	122.00
one brick thick	m	178.00
one thick, curved	m	192.00
Excavate trench, lay concrete foundation, build wall 1m high in facing bricks (basic price £350 per 1000) in cement mortar (1:3), Flemish bond, facework both sides		
half brick thick	m	110.00
half brick thick, curved	m	124.00

	Unit	Rate £
one brick thick	m	180.00
one thick, curved	m	194.00
Excavate trench, lay concrete foundation, build wall 1m high in facing bricks (basic price £500 per 1000) in cement mortar (1:3), Flemish bond, facework one side		
half brick thick	m	130.00
half brick thick, curved	m	144.00
one brick thick	m	182.00
one thick, curved	m	198.00
Excavate trench, lay concrete foundation, build wall 1m high in facing bricks (basic price £500 per 1000) in cement mortar (1:3), Flemish bond, facework both sides		
half brick thick	m	132.00
half brick thick, curved	m	146.00
one brick thick	m	184.00
one thick, curved	m	198.00

	Unit	Rate £
MASONRY		
Excavate trench, lay concrete foundation, build random rubble wall laid dry, 1m high, thickness		
300mm	m	150.00
450mm	m	205.00
500mm	m	230.00
Excavate trench, lay concrete foundation, build random rubble wall battered one side, laid dry, 1m high, thickness		
300mm	m	160.00
450mm	m	220.00
500mm	m	245.00
Excavate trench, lay concrete foundation, build random rubble wall battered both sides, laid dry, 1m high, thickness		
300mm	m	165.00
450mm	m	225.00
500mm	m	250.00
Excavate trench, lay concrete foundation, build random rubble wall in gauged mortar (1:1:6), 1m high, thickness		
300mm	m	175.00
450mm	m	235.00
500mm	m	260.00

	Unit	Rate £
Excavate trench, lay concrete foundation, build random rubble wall in gauged mortar (1:1:6), 1m high, battered one side, thickness		
300mm	m	180.00
450mm	m	240.00
500mm	m	265.00
Excavate trench, lay concrete foundation, build random rubble wall in gauged mortar (1:1:6), 1m high, battered both sides, thickness		
300mm	m	185.00
450mm	m	245.00
500mm	m	270.00
Excavate trench, lay concrete foundation, build irregular coursed rubble wall in gauged mortar (1:1:6), 1m high, thickness		
300mm	m	155.00
450mm	m	210.00
500mm	m	235.00
Excavate trench, lay concrete foundation, build coursed rubble wall in gauged mortar (1:1:6), 1m high, thickness		
300mm	m	165.00
450mm	m	220.00
500mm	m	245.00

	Unit	Rate £
KERBS AND EDGINGS		
Excavate trench, lay concrete foundation for precast concrete straight kerb, size		
127 × 254mm	m	20.00
152 × 305mm	m	25.00
Excavate trench, lay concrete foundation for precast concrete curved kerb, size		
127 × 254mm	m	25.00
152 × 305mm	m	30.00
Excavate trench, lay concrete foundation for precast concrete straight channel, size		
127 × 254mm	m	24.00
Excavate trench, lay concrete foundation for precast concrete curved channel, size		
127 × 254mm	m	26.00
Excavate trench, lay concrete foundation for precast concrete straight edging, size		
51 × 152mm	m	18.00
52 × 203mm	m	18.00

	Unit	Rate £
BEDS AND PAVINGS		
Excavate by hand, lay sub-base of		
granular material 100mm thick, reinforced concrete bed 100mm thick	m2	30.00
granular material 150mm thick, reinforced concrete bed 100mm thick	m2	35.00
sand 100mm thick, reinforced concrete bed 100mm thick	m2	30.00
sand 150mm thick, reinforced concrete bed 150mm thick	m2	38.00
hardcore 100mm thick, reinforced concrete bed 100mm thick	m2	42.00
hardcore 150mm thick, reinforced concrete bed 150mm thick	m2	48.00
Excavate by hand, lay sub-base of sand 100mm thick, lay brick paving 215 × 103mm (£250 per 1000)		
straight joints both ways		
bricks laid flat	m2	60.00
bricks laid on edge	m2	75.00
herringbone pattern		
bricks laid flat	m2	65.00
bricks laid on edge	m2	80.00
Excavate by hand, lay sub-base of sand 100mm thick, lay brick paving 215 × 103mm (£350 per 1000)		

	Unit	Rate £
straight joints both ways		
bricks laid flat	m2	74.00
bricks laid on edge	m2	88.00
herringbone pattern		
bricks laid flat	m2	80.00
bricks laid on edge	m2	94.00
Excavate by hand, lay sub-base of sand 100mm thick, lay brick paving 215 × 103mm (£500 per 1000)		
straight joints both ways		
bricks laid flat	m2	82.00
bricks laid on edge	m2	94.00
herringbone pattern		
bricks laid flat	m2	86.00
bricks laid on edge	m2	98.00
Excavate by hand, lay sub-base of sand 100mm thick, lay precast precast concrete flags, spot bedded cement mortar		
natural colour		
450 × 450 × 50mm	m2	46.00
450 × 450 × 50mm	m2	42.00
600 × 600 × 50mm	m2	38.00
600 × 900 × 50mm	m2	36.00
coloured		
450 × 450 × 50mm	m2	50.00
450 × 450 × 50mm	m2	46.00
600 × 600 × 50mm	m2	42.00
600 × 900 × 50mm	m2	40.00

	Unit	Rate £
Excavate by hand, lay sub-base of sand 100mm thick, lay reconstituted York stone flags, spot bedded cement mortar		
300 × 300 × 50mm	m2	60.00
300 × 450 × 50mm	m2	55.00
300 × 600 × 50mm	m2	50.00
450 × 450 × 50mm	m2	48.00
600 × 600 × 50mm	m2	46.00
Excavate by hand, lay sub-base of sand 100mm thick, lay York stone flags, spot bedded in cement mortar, laid straight both ways		
50mm thick		
cut to size	m2	130.00
random sizes	m2	115.00
63mm thick		
cut to size	m2	140.00
random sizes	m2	125.00
75mm thick		
cut to size	m2	155.00
random sizes	m2	135.00
Excavate by hand, lay sub-base of sand 100mm thick, lay natural granite setts, size 100 × 100 × 150mm, bedded in cement mortar	m2	95.00

	Unit	Rate £
Excavate by hand, lay sub-base of sand 100mm thick, lay concrete setts, bedded in cement mortar, size		
150 × 150 × 80mm	m ²	95.00
200 × 150 × 80mm	m ²	90.00
Excavate by hand, lay sub-base of sand 100mm thick, lay concrete paviors, bedded in cement mortar, size		
200 × 100 × 60mm	m ²	40.00
200 × 100 × 80mm	m ²	42.00

DRAINAGE

Excavate trench by hand, lay
100mm diameter 'Supersleve' pipe,
granular bed and surround, trench
depth

0.50m	m	47.00
0.75m	m	57.00
1.00m	m	67.00
1.25m	m	85.00
1.50m	m	112.00
1.75m	m	129.00
2.00m	m	150.00
2.25m	m	167.00
2.50m	m	189.00
2.75m	m	207.00
3.00m	m	234.00

	Unit	Rate £
Excavate trench by hand, lay 150mm diameter 'Hepsleve' pipe, granular bed and surround, trench depth		
0.50m	m	57.00
0.75m	m	67.00
1.00m	m	77.00
1.25m	m	95.00
1.50m	m	122.00
1.75m	m	140.00
2.00m	m	150.00
2.25m	m	177.00
2.50m	m	194.00
2.75m	m	217.00
3.00m	m	244.00
Manhole complete including hand excavation, concrete base and benching, engineering brickwork, channels and cast iron cover, depth		
1.00m	nr	525.00
1.50m	nr	660.00
2.00m	nr	810.00

Land drainage

Excavate trench 225mm wide for 75mm clay field drain pipe and backfill with gravel		
trench depth, 500mm	m	15.00
trench depth, 750mm	m	18.00
trench depth, 1000mm	m	22.00

	Unit	Rate £
Excavate trench 300mm wide for 75mm clay field drain pipe and backfill with gravel		
trench depth, 500mm	m	17.00
trench depth, 750mm	m	21.00
trench depth, 1000mm	m	25.00
Excavate trench 225mm wide for 100mm clay field drain pipe and backfill with gravel		
trench depth, 500mm	m	18.00
trench depth, 750mm	m	21.00
trench depth, 1000mm	m	25.00
Excavate trench 300mm wide for 100mm clay field drain pipe and backfill with gravel		
trench depth, 500mm	m	18.00
trench depth, 750mm	m	21.00
trench depth, 1000mm	m	25.00
Excavate trench 225mm wide for 100mm clay field drain pipe and backfill with gravel		
trench depth, 500mm	m	21.00
trench depth, 750mm	m	24.00
trench depth, 1000mm	m	28.00

	Unit	Rate £
Excavate trench 300mm wide for 100mm clay field drain pipe and backfill with gravel		
trench depth, 500mm	m	22.00
trench depth, 750mm	m	25.00
trench depth, 1000mm	m	29.00
Excavate trench 225mm wide for 60mm perforated field drain pipe and backfill with gravel		
trench depth, 500mm	m	11.00
trench depth, 750mm	m	14.00
trench depth, 1000mm	m	18.00
Excavate trench 300mm wide for 80mm perforated field drain pipe and backfill with gravel		
trench depth, 500mm	m	13.00
trench depth, 750mm	m	17.00
trench depth, 1000mm	m	21.00
Excavate trench 225mm wide for 100mm clay field drain pipe and backfill with gravel		
trench depth, 500mm	m	14.00
trench depth, 750mm	m	17.00
trench depth, 1000mm	m	21.00
Excavate trench 300mm wide for 100mm clay field drain pipe and backfill with gravel		

	Unit	Rate £
Land drainage (cont'd)		
trench depth, 500mm	m	16.00
trench depth, 750mm	m	20.00
trench depth, 1000mm	m	24.00
Excavate trench 225mm wide for 100mm clay field drain pipe and backfill with gravel		
trench depth, 500mm	m	19.00
trench depth, 750mm	m	22.00
trench depth, 1000mm	m	26.00
Excavate trench 300mm wide for 100mm clay field drain pipe and backfill with gravel		
trench depth, 500mm	m	21.00
trench depth, 750mm	m	25.00
trench depth, 1000mm	m	29.00

Part Five

TOOL AND EQUIPMENT HIRE

Tool and equipment hire

24 hours	Extra 24 hours	Week
£	£	£

TOOL AND EQUIPMENT HIRE

The following rates are based on average hire charges made by hire firms in the UK. Check your local dealer for more information. The rates exclude VAT.

Alloy towers

Single width, height

2.2m	41.00	22.00	82.00
3.2m	51.00	26.00	102.00
4.2m	60.00	30.00	120.00
5.2m	70.00	35.00	140.00
6.2m	78.00	39.00	156.00
7.2m	87.00	43.00	174.00
8.2m	96.00	48.00	192.00
9.2m	104.00	52.00	208.00
10.2m	112.00	56.00	224.00

Full width, height

2.2m	76.00	38.00	152.00
3.2m	88.00	44.00	176.00
4.2m	100.00	50.00	200.00
5.2m	110.00	55.00	220.00
6.2m	124.00	62.00	248.00
7.2m	148.00	74.00	296.00
8.2m	160.00	80.00	320.00

	24 hours	Extra 24 hours	Week
	£	£	£
Ladders			
Roof ladders			
single, 5.9m	24.00	12.00	48.00
double, 4.6m	22.00	11.00	44.00
double, 7.6m	26.00	13.00	46.00
Push-up ladders			
double, 3.5m	16.00	8.00	32.00
double, 5.0m	22.00	11.00	44.00
treble, 2.5m	16.00	8.00	32.00
treble, 3.5m	22.00	11.00	44.00
Rope-operated ladders			
double, 6.0m	38.00	19.00	76.00
treble, 5.2m	44.00	22.00	88.00
treble, 6.0m	50.00	25.00	100.00
Compaction			
Vibrating rollers			
small	58.00	29.00	115.00
Rammer	45.00	25.00	90.00
Vibrating plate			
petrol	26.00	13.00	52.00

	24 hours	Extra 24 hours	Week
	£	£	£
Concrete work			
Tip up			
electric	12.00	6.00	25.00
petrol	13.00	6.00	26.00
Beam screed	60.00	30.00	120.00
Power trowel	41.00	20.00	82.00
Poker vibrator			
electric	34.00	17.00	68.00
Pumping			
Diaphragm pumps			
50mm	45.00	23.00	90.00
75mm	55.00	28.00	110.00
Centrifugal pumps			
50mm	28.00	14.00	56.00
75mm	33.00	17.00	66.00
Drainage			
Drain snake			
man held	22.00	11.00	44.00
Power jet	170.00	85.00	340.00
Drain inspection camera	86.00	43.00	172.00

	24 hours	Extra 24 hours	Week
	£	£	£
Landscaping			
Lawn aerator powered	61.00	30.00	122.00
man held	10.00	5.00	20.00
Roller	10.00	5.00	20.00
Mower rotary with box (500mm)	14.00	7.00	28.00
Scarifier	37.00	18.00	74.00
Flame gun	16.00	8.00	32.00
Turf cutter	64.00	32.00	128.00
Power digger	41.00	20.00	52.00
Tiller	22.00	11.00	44.00
Stump grinder	99.00	50.00	198.00
Shredder 35mm	19.00	10.00	38.00

	24 hours	Extra 24 hours	Week
	£	£	£
Hedge trimmer			
electric	12.00	6.00	24.00
petrol	31.00	15.00	62.00
Long handled trimmer			
1.3m	39.00	20.00	78.00
Logging saw	34.00	17.00	68.00
Pruning saw	15.00	8.00	30.00
Long handle pruner			
petrol	42.00	21.00	84.00
man held	8.00	4.00	16.00
Chain saw			
petrol	60.00	20.00	98.00
Leaf sucker			
petrol	25.00	13.00	50.00
Fence post borer			
petrol	42.00	21.00	84.00
man held	8.00	4.00	16.00
Sundries			
Tarpaulins			
4 × 5m			22.00
8 × 5m			28.00

Part Six

BUSINESS MATTERS

Starting a business

Running a business

Taxation

STARTING A BUSINESS

Most small businesses come into being for one of two reasons – ambition or desperation! A person with genuine ambition for commercial success will never be completely satisfied until he has become self-employed and started his own business. But many successful businesses have been started because the proprietor was forced into this course of action because of redundancy.

Before giving up his job, the would-be businessman should consider carefully whether he has the required skills and the temperament to survive in the highly competitive self-employed market. Before commencing in business it is essential to assess the commercial viability of the intended business because it is pointless to finance a business that is not going to be commercially viable.

In the early stages it is important to make decisions such as: What exactly is the product being sold? What is the market view of that product? What steps are required before the developed product is first sold and where are those sales coming from?

As much information as possible should be obtained on how to run a business before taking the plunge. Sales targets should be set and it should be clearly established how those important first sales are obtained. Above all, do not underestimate the amount of time required to establish and finance a new business venture.

Whatever the size of the business it is important that you put in writing exactly what you are trying to do. This means preparing a business plan that will not only assist in establishing your business aims but is essential if you need to raise finance. The contents of a typical business plan are set out later. It is important to realise that you are not on your own and there are many contacts and advising agencies that can be of assistance.

Potential customers and trade contacts

Many persons intending to start a business in the construction industry will have already had experience as employees. Use all contacts to check the market, establish the sort of work that is available and the current charge out rates.

In the domestic market, check on the competition for prices and services provided. Study advertisements for your kind of work and try to get firm promises of work before the start-up date.

Testing the market

Talk to as many traders as possible operating in the same field. Identify if the market is in the industrial, commercial, local government or in the domestic field. Talk to prospective customers and clients and consider how you can improve on what is being offered in terms of price, quality, speed, convenience, reliability and back-up service.

Business links

There is no shortage of information about the many aspects of starting and running your own business. Finance, marketing, legal requirements, developing your business idea and taxation matters are all the subject of a mountain of books, pamphlets, guides and courses so it should not be necessary to pay out a lot of money for this information. Indeed, the likelihood is that the aspiring businessman will be overwhelmed with information and will need professional guidance to reduce the risk of wasting time on studying unnecessary subjects.

Business Links are now well established and provide a good place to start for both information and advice. These organisations provide a 'one-stop-shop' for advice and assistance to owner-managed businesses. They will often replace the need to contact Training and Enterprise Councils (TECs) and many of the other official organisations listed below.

Point of contact: telephone directory for address.

Training and Enterprise Councils (TECs)

TECs are comprised of a board of directors drawn from the top men in local industry, commerce, education, trade unions etc., who, together with their staff and experienced business counsellors, assist both new and established concerns in all aspects of running a business. This takes the form of across-the-table advice and also hands-on assistance in management, marketing and finance if required. There are also training courses and seminars available in most areas together with the possibility of grants in some areas.

Point of contact: local Jobcentre or Citizens' Advice Bureau.

Banks

Approach banks for information about the business accounts and financial services that are available. Your local Business Link can advise on how best to find a suitable bank manager and inform you as to what the bank will require.

Shop around several banks and branches if you are not satisfied at first because managers vary widely in their views on what is a viable business proposition. Remember, most banks have useful free information packs to help business start-up.

Point of contact: local bank manager.

HM Inspector of Taxes

Make a preliminary visit to the local tax office enquiry counter for their publications on income tax and national insurance contributions.

SA/Bk 3	Self assessment. A guide to keeping records for the self employed
IR 15(CIS)	Construction Industry Tax Deduction Scheme
CWL	Starting your own business,
IR 40(CIS)	Conditions for Getting a Sub-Contractor's Tax Certificate
NE1	PAYE for Employers (if you employ someone)
NE3	PAYE for new and small Employers
IR 56/N139	Employed or Self-Employed. A guide for tax and National Insurance
CA02	National Insurance contributions for self employed people with small earnings.

Remember, the onus is on the taxpayer, within three months, to notify the Inland Revenue that he is in business and failure to do so may result in the imposition of £100 penalty. Either send a letter or use the form provided at the back of the *'Starting your own business booklet'* to the Inland Revenue National Insurance Contributions Office and they will inform your local tax office of the change in your employment status.

Point of contact: telephone directory for address.

Inland Revenue National Insurance Contributions Office

Self Employment Services
Customer Accounts Section
Longbenton
Newcastle NE 98 1ZZ

Telephone the Call Centre on 0845 9154655 and ask for the following publications:

CWL2	Class 2 and Class 4 Contributions for the Self Employed
CA02	People with Small Earnings from Self-Employment
CA04	Direct Debit – The Easy Way to Pay. Class 2 and Class 3
CA07	Unpaid and Late Paid Contributions and for Employers
CWG1	Employer's Quick Guide to PAYE and NIC Contributions
CA30	Employer's Manual to Statutory Sick Pay

VAT

The VAT office also offer a number of useful publications, including;

700	The VAT Guide
700/1	Should I be Registered for VAT?
731	Cash Accounting
732	Annual Accounting
742	Land and Property

Information about the Cash Accounting Scheme and the introduction of annual VAT returns are dealt with later.

Point of contact: telephone directory for address.

Local authorities

Authorities vary in provisions made for small businesses but all have been asked to simplify and cut delays in planning applications. In Assisted Areas, rent-free periods and reductions in rates may be available on certain

industrial and commercial properties. As a preliminary to either purchasing or renting business premises, the following booklets will be helpful:

Step by Step Guide to Planning Permission for Small Businesses, and Business Leases and Security of Tenure

Both are issued by the Department of Employment and are available at council offices, Citizens' Advice Bureau and TEC offices. Some authorities run training schemes in conjunction with local industry and educational establishments.

Point of contact: usually the Planning Department - ask for the Industrial Development or Economic Development Officer.

Department of Trade and Industry

The services formally provided by the Department are now increasingly being provided by Business Link. The Department can still, however, provide useful information on available grants for start-ups.

Point of contact: telephone 0207-215 5000 and ask for the address and telephone number of the nearest DTI office and copies of their explanatory booklets.

Department of Transport and the Regions

Regulations are now in force relating to all forms of waste other than normal household rubbish. Any business that produces, stores, treats, processes, transports, recycles or disposes of such waste has a 'duty of care' to ensure it is properly discarded and dealt with.

Practical guidance on how to comply with the law (it is a criminal offence punishable by a fine not to) is contained in a booklet *Waste Management: The Duty of Care: A Code of Practice* obtainable from HMSO Publication Centre, PO Box 276, London SW8 5DT. Telephone 0207-873 9090.

Accountant

The services of an accountant are to be strongly recommended from the

beginning because the legal and taxation requirements start immediately and must be properly complied with if trouble is to be avoided later. A qualified accountant must be used if a limited company is being formed but an accountant will give advice on a whole range of business issues including book-keeping, tax planning and compliance to finance raising and will help in preparing annual accounts.

It is worth spending some time finding an accountant who has other clients in the same line of business and is able to give sound advice particularly on taxation and business finance and is not so overworked that damaging delays in producing accounts are likely to arise. Ask other traders whether they can recommend their own accountant. Visit more than one firm of accountants, ask about the fees they charge and how much the production of annual accounts and agreement with the Inland Revenue are likely to cost. A good accountant is worth every penny of his fees and will save you both money and worry.

Solicitor

Many businesses operate without the services of a solicitor but there are a number of occasions when legal advice should be sought. In particular, no one should sign a lease of premises without taking legal advice because a business can encounter financial difficulty through unnoticed liabilities in its lease. Either an accountant or solicitor will help with drawing up a partnership agreement that all partnerships should have. A solicitor will also help to explain complex contractual terms and prepare draft contracts if the type of business being entered into requires them.

Insurance broker

Policies are available to cover many aspects of business including:

- employer's liability – compulsory if the business has employees
- public liability – essential in the construction industry
- motor vehicles
- theft of stock, plant and money
- fire and storm damage
- personal accident and loss of profits
- key man cover.

Brokers are independent advisers who will obtain competitive quotations on your behalf. See more than one broker before making a decision – their advice is normally given free and without obligation.

Point of contact: telephone directory or write for a list of local members to:

The British Insurance Brokers' Association
Consumer Relations Department
BIBA House
14 Bevis Marks
London
EC3A 7NT (telephone: 0207-623 9043)

or contact
The Association of British Insurers
51 Gresham Street
London
EC2V 7HQ (telephone: 0207-600 3333)

who will supply free a package of very useful advice files specially designed for the small business.

The Health and Safety Executive

The Executive operates the legislation covering everyone engaged in work activities and has issued a very useful set of '*Construction Health Hazard Information Sheets*' covering such topics as handling cement, lead and solvents, safety in the use of ladders, scaffolding, hoists, cranes, flammable liquids, asbestos, roofs and compressed gases etc. A pack of these may be obtained free from your local HSE office or The Health & Safety Executive Central Office, Sheffield (telephone: 01142-892345) or HSE Publications (telephone: 01787-881165).

Business plan

As stated before, once the relevant information has been obtained it should be consolidated into a formal business plan. The complexity of the plan will depend in the main on the size and nature of the business concerned. Consideration should be given to the following points.

Objectives

It is important to establish what you are trying to achieve both for you and the business. A provider of finance may be particularly influenced by your ability to achieve short- and medium-term goals and may have confidence in continuing to provide finance for the business. From an individual point of view, it is important to establish goals because there is little point in having a business that only serves to achieve the expectations of others whilst not rewarding the would-be businessman.

History

If you already own an existing business then commentary on its existing background structure and history to date can be of assistance. There is no substitute for experience and any existing contacts you have in the construction industry will be of assistance to you. The following points should also be considered for inclusion:

- a brief history of the business identifying useful contacts made
- the development of the business, highlighting significant successes and their relevance to the future
- principal reasons for taking the decision to pursue this new venture
- details of present financing of the business.

Products or services

It is important to establish precisely what it is you are going to sell. Does the product or service have any unique qualities which gives it your advantages over competitors? For example, do you have an ability to react more quickly than your competitors and are you perceived to deliver a higher quality product or service? A typical business plan would include:

- description of the main products and services
- statement of disadvantages and advising how they will be overcome
- details of new products and estimated dates of introduction

- profitability of each product
- details of research and development projects
- after-sales support.

Markets and marketing strategy

This section of the business plan should show that thought has been given to the potential of the product. In this regard it can often be useful to identify major competitors and make an overall assessment of their strengths and weaknesses, including the following:

- an overall assessment of the market, setting out its size and growth potential
- a statement showing your position within the market
- an identification of main customers and how they compare
- details of typical orders and buying habits
- pricing strategy
- anticipated effect on demand of pricing
- expectation of price movement
- details of promotions and advertising campaigns.

It is important to identify your customers and why they might buy from you. Those entering the domestic side of the business will need to think about the best way to reach potential customers. Are local word-of-mouth recommendations enough to provide reasonable work continuity. If not, what is the most effective method of advertising to reach your customer base?

Remember, advertising is costly. It is a waste of funds to place an advertisement in a paper circulating in areas A, B, C & D if the business only covers area A.

Research and development

If you are developing a product or a particular service, then an assessment should be made on what stage it is at and what further finance is required to complete it. It may also be useful to make an assessment on the vulnerability of the product or service to innovations being initiated by others.

Basis of operation

Detail what facilities you will require in order to carry on your trade in the form of property, working and storage areas, office space, etc. An assessment should also be made on the assistance you will require from others. Your business plan might include:

- a layman's guide to the process or work
- details of facilities, buildings and plant
- key factors affecting production, such as yields and wastage
- raw material demand and usage.

Management

This section is one of the most important because it demonstrates the capability of the would-be businessman. The skills you need will cover production, marketing, finance and administration. In the early stages you may be able to do this yourself but as the business grows it may be required to develop a team to handle these matters. The following points should be considered for inclusion in the plan:

- set out age, experience and achievements
- state additional management requirements in the future and how they are to be met
- identify current weaknesses and how they will be overcome
- state remuneration packages and profit expectations
- give detailed CVs in appendices.

Advertising and retraining may be required in order to identify and provide suitable personnel where expertise and experience are lacking.

Financial information

It is important to detail, if any, the present financial position of your business and the budgeted profit and loss accounts, cash flows and balance sheets. These integrated forecasts should be prepared for the next twelve months at monthly intervals and annually for the following two years.

If the forecasts are to be reasonably accurate then the businessman must make some early decisions about:

- the premises where the business will be based, the initial repairs and alterations that might be required and an assessment of the total cost
- which plant, equipment and transport are needed, whether they are to be leased or purchased and what the cost will be?
- how much stock of materials, if any, should be carried? the bare minimum only should be acquired, so reliable suppliers should be found
- what will be the weekly bills for overheads, wages and the proprietor's living costs?
- what type of work is going to be undertaken, and how much profit can realistically be obtained?
- how often are invoices to be presented?

Your business plan should include the following information:

- explanation of how sales forecasts are prepared
- levels of production
- details of major variable overheads and estimates
- assumptions in cash flow forecasting, inflation and taxation.

Finance required and its application

The financial details given above should produce an accurate assessment of the funds required to finance the business. It is important to distinguish between those items that require permanent finance and those that will eventually be converted to cash because it is not usually advisable to finance long-term assets with personal equity.

Working capital such as stock and debtors can usually be obtained by an overdraft arrangement but your accountant or bank will advise you on this.

Executive summary

Although it is prepared last, this summary will be the first part of your business plan. Remember that business plans are prepared for busy people and their decision on finance may be based solely on this section. It should cover two or three pages and deal with the most important aspects and opportunities in your plan. Here are some of the main headings:

- key strategies
- finance required and how it is to be used
- management experience
- anticipated returns and profits
- markets.

The appendices should include:

- CVs of key personnel
- organisation charts
- market studies
- product advertising literature
- professional references
- financial forecasts
- glossary of terms.

If you feel that any additional information should be provided in support of your proposal, then this is usually best included in the appendices.

Follow up

Please remember that once your plan is prepared, it is important to examine it again regularly and update the forecasts and financial information. This is a working document and can be an important tool in running the business.

Sources of finance

Personal funds

Finance, like charity, often begins at home and a would-be businessman should make a realistic assessment of his net worth, including the value of his house after deducting the mortgage(s) outstanding on it, savings, any car or van owned and any sums which the family are prepared to contribute but deducting any private borrowings which will come due for payment. The whole of these funds may not be available (for instance, money which has been loaned to a friend or relative who is known to be unable to repay at the present time).

It may not be desirable that all capital should be put at risk on a business venture so the following should be established:

- how much cash you propose to invest in the business
- whether the family home will be made available for any business borrowing
- state total finance required
- how finance is anticipated being raised
- interest and security to be provided
- expected return on investment.

Whilst it may be wise not to pledge too much of the family assets, it has to be remembered that the bank will be looking closely at the degree to which the proprietor has committed himself to the venture and will not be impressed by an application for a loan where the applicant is prepared to risk only a small fraction of his own resources.

Having decided how much of his own funds to contribute, the businessman can now see the level of shortfall and consider how best to fill it. Consideration should be given to partners where the shortfall is large and particularly when there is a need for heavy investment in fixed assets, such as premises and capital equipment. It may be worthwhile starting a limited company with others also subscribing capital and to allow the banks to take security against the book debts.

Banks

The first outside source of money to which most businessmen turn is the bank and here are a few guidelines on approaching a bank manager:

- present your business plan to him; remember to use conservative estimates which tend to understate rather than overstate the forecast sales and profits
- know the figures in detail and do not leave it to your accountant to explain them for you. The bank manager is interested in the businessman not his advisers and will be impressed if the businessman demonstrates a grasp of the financing of his business

- understand the difference between short- and long-term borrowing
- ask about the Government Loan Guarantee Scheme if there is a shortage of security for loans. The bank may be able to assist, or depending on certain conditions being met, the Government may guarantee a certain percentage of the bank loan.

Remember the bank will want their money back, so bank borrowings are usually required to be secured by charges on business assets. In start-up situations, personal guarantees from the proprietors are normally required. Ensure that if these are given they are regularly reviewed to see if they are still required.

Enterprise Investment Scheme – business angels

If an outside investor is sought in a business he will probably wish to invest within the terms of the Enterprise Investment Scheme which enables him to gain income tax relief at 20% on the amount of his investment.

Additionally, any investment can be used to defer capital gains tax. The rules are complex and professional advice should always be sought.

Hire purchase/leasing

It is not always necessary to purchase assets outright that are required for the business and leasing and hire purchase can often form an integral part of a business's medium-term finance strategy.

Venture capital

In addition, there are a number of other financial institutions in the venture capital market that can help well-established businesses, usually limited companies, who wish to expand. They may also assist well-conceived start-ups. They will provide a flexible package of equity and loan capital but only for large amounts, usually sums in excess of £150,000 and often £250,000.

Usually the deal involves the financial institution having a minority interest in the voting share capital and a seat on the board of the company. Arrangements for the eventual purchase of the shares held by the finance company by the private shareholders are also normally incorporated in the scheme.

The Royal Jubilee and Princes Trust

These trusts through the Youth Business Initiative provide bursaries of not more than £1,000 per individual to selected applicants who are unemployed and age 25 or over. Grants may be used for tools and equipment, transport, fees, insurance, instruction and training but not for working capital, rent and rates, new materials or stock. They operate through a local representative whose name and address may be ascertained by contacting the Prince's Youth Business. Point of contact: telephone 0207-321 6500.

The Business Start-up Scheme

This is an allowance of £50 per week, in addition to any income made from your business, paid for twenty weeks. To qualify you must be at least 18 and under 65, work at least 36 hours per week in the business and have been unemployed for at least six months or fall into one of the other categories: disabled, ex-HMS or redundant.

The first step is to get the booklet on the subject from your local Jobcentre or TEC that includes details on how and where to apply. Once in receipt of the enterprise allowance, you will also have the benefit of advice and assistance from an experienced businessman from your TEC. All the initial counselling services and training courses are free.

RUNNING A BUSINESS

Many businesses are run without adequate information being available to check trend in their vital areas, e.g. marketing, money and managerial efficiency. It is essential to look critically at all aspects of the business in order to maximise profits and reduce inefficiency. Regular meaningful information is required on which management can concentrate. This will vary according to the proprietor's business but will often concentrate on debtors, creditors, cash, sales and orders.

Proprietors often have the feeling that the business should be 'doing better' but are unable to identify what is going wrong. Sometimes there is the worrying phenomenon of a steadily increasing work programme coupled with a persistently reducing bank balance or rising overdraft. Some useful ways of checking the position and of identifying problem areas are given below.

Marketing

Throughout his business life the entrepreneur should continuously study the methods and approach of his competitors. A shortcoming frequently found in ailing concerns is that the proprietor thinks he knows what his customers want better than they do.

The term 'market research' sounds both difficult and expensive but a very simple form of it can be done quite effectively by the businessman and his sales staff. Existing and prospective customers should be approached and asked what they want in terms of price, quality, design, payment terms, follow-up service, guarantees and services.

The initial approach might be by a leaflet or letter followed by a personal call. As an on-going part of management, all staff with customer contact should be encouraged to enquire about and record customer preferences, complaints, etc. and feed it back to management.

Other sources of information can be trade and business journals, trade exhibitions, suppliers and representatives from which information about trends, new techniques and products can be obtained and studied. Valuable information can also be gained from studying competitors and the following questions should be asked:

- what do they sell and at what prices?
- what inducements do they offer to their customers, e.g. credit facilities, guarantees, free offers and discounts?
- how do they reach their customers - local/national advertising, mail shots, salesmen, local radio and TV?
- what are the strongest aspects of their appeal to customers and have they any weaknesses?

The businessman should apply all the information gathered from customers and competitors to his own services with a view to making sure he is offering the right product at the right price in the most attractive way and in the most receptive market.

In a small business where the proprietor is also his own salesman he must give careful thought on how he can best present his product and himself. For instance, if he is working solely within the construction industry his main problems are likely to centre on getting a C1S6 Certificate and using trade contacts to get sub-contract work.

However, for those who serve the general public, presentation can be a vital element in getting work. The customer is looking for efficiency, reliability and honesty in a trader and quality, price and style in the product. To bring out these facets in discussion with a potential customer is a skilled task. A short course on marketing techniques could pay handsome dividends. The Business Link will give the names and addresses of such courses locally.

Financial control

Unfortunately, some unsuccessful firms do not seek financial advice until too late when the downward trend cannot be halted. Earlier attention to the problems may have saved some of them so it is important to recognise the tell-tale signs. There are some tests and checks that can be done quite easily.

Cash flow

Cash flow is the lifeblood of the business and more businesses fail through lack of cash than for any other reason. Cash is generated through the conversion of work into debtors and then into payment and also through the deferral of the payment of supplies for as long a period that can be

negotiated. The objective must be to keep stock, work in progress, debts to a minimum and creditors to a maximum.

Debtor days

This is calculated by dividing your trade debtors by annual sales and multiplying by 365. This shows the number of days' credit being afforded to your customers and should be compared both with your normal trade terms and the previous month's figures. Normal procedures should involve the preparation of a monthly-aged list of debtors showing the name of the customer, the value and to which month it relates.

The oldest and largest debtors can be seen at a glance for immediate consideration of what further recovery action is needed. The list may also show over-reliance on one or two large customers or the need to stop supplying a particularly bad payer until his arrears have been reduced to an acceptable level. Consideration should be given to making up bills to a date before the end of the month and making sure the accounts are sent out immediately, followed by a statement four weeks later.

Consider giving discounts for prompt payment. If all else fails, and legal action for recovery is being contemplated, call at the County Court and ask for their leaflets.

Stock turn

The level of stock should be kept to a minimum and the number of days' stock can be calculated by dividing the stock by the annual purchases and multiplying by 365. A worsening trend on a month-by-month basis shows the need for action. It is important to regularly make a full inventory of all stock and dispose of old or surplus items for cash. A stock control procedure to avoid stock losses and to keep stock to a minimum should be implemented.

Profitability

Whilst cash is vital in the short-term, profitability is vital in the medium-term. The two key percentage figures are the gross profit percentage and the net profit percentage. Gross profit is calculated by deducting the cost of materials and direct labour from the sales figures whilst net profit is

arrived at after deducting all overheads. Possible reasons for changes in the gross profit percentage are:

- not taking full account of increases in materials and wages in the pricing of jobs
- too generous discount terms being offered
- poor management, over-manning, waste and pilferage of materials
- too much down-time on equipment which is in need of replacement.

If net profit is deteriorating after the deduction of an appropriate reward for your own efforts, including an amount for your own personal tax liability, you should review each item of overhead expenditure in detail asking the following questions:

- can savings be made in non-productive staff?
- is sub-contracting possible and would it be cheaper?
- have all possible energy-saving methods been fully explored?
- do the company's vehicles spend too much time in the yard and can they be shared or their number reduced?
- is the expenditure on advertising producing sales - review in association with 'marketing' above?

Over-trading

Many inexperienced businessmen imagine that profitability equals money in the bank and in some cases, particularly where the receipts are wholly in cash, this may be the case. But often, increased business means higher stock inventories, extra wages and overheads, increased capital expenditure on premises and plant, all of which require short-term finance.

Additionally, if the debtors show a marked increase as the turnover rises, the proprietor may find to his surprise that each expansion of trade reduces rather than increases his cash resources and he is continually having to rely on extensions to his existing credit.

The business, which had enough funds for start-up, finds it does not have sufficient cash to run at the higher level of operation and the bank manager may be getting anxious about the increasing overdraft. It is

essential for those who run a business that operates on credit terms to be aware that profitability does not necessarily mean increased cash availability. Regular monthly management information on marketing and finance as described in this chapter will enable over-trading to be recognised and remedial action to be taken early.

If the situation is appreciated only when the bank and other creditors are pressing for money, radical solutions may be necessary, such as bringing in new finance, sale and leaseback of premises, a fundamental change in the terms of trade or even selling out to a buyer with more resources. Help from the firm's accountant will be needed in these circumstances.

Break-even point

The costs of a business may be divided into two types - variable and fixed. *Variable costs* are those which increase or decrease as the volume of work goes up or down and include such items as materials used, direct labour and power machine tools. *Fixed costs* are not related to turnover and are sometimes called fixed overheads. They include rent, rates, insurance, heat and light, office salaries and plant depreciation. These costs are still incurred even though few or no sales are being made.

Many small businessmen run their enterprises from home using family labour as back-up; they mainly sell their own labour and buy materials and hire plant only as required. By these means they reduce their fixed costs to a minimum and start making profits almost immediately. However, larger firms that have business premises, perhaps a small workshop, an office and vehicles, need to know how much they have to sell to cover their costs and become profitable.

In the case of a new business it is necessary to estimate this figure but where annual accounts are available a break-even chart based on them can be readily prepared. Suppose the real or estimated figures (expressed in £000s) are:

	%	£
Sales	100	400
Variable costs	<u>66</u>	<u>265</u>
Gross profit	34	135
Fixed costs	<u>13</u>	<u>50</u>
Net profit	<u>21</u>	<u>85</u>

$$\begin{aligned}\text{Break-even point} &= \frac{50 \text{ divided by } (1 \text{ less variable costs \%})}{\text{sales}} \\ &= 50 \text{ divided by } (1 \text{ less } 0.6625) \\ &= 50 \text{ divided by } 0.3375 \\ &= \text{£148 (thousand)}\end{aligned}$$

In practice, things are never quite as clear cut as the figures show, but nevertheless this is a very useful tool for assessing not only the break-even point but also the approximate amount of loss or profit arising at differing levels of turnover and also for considering pricing policy.

TAXATION

The first decision usually required to be made from a taxation point of view is which trading entity to adopt. The options available are set out below.

Sole trader

A sole trader is a person who is in business on his own account. There is no statutory requirement to produce accounts nor is there a necessity to have them audited. A sole trader may, however, be required to register for PAYE and VAT purposes and maintain records so that Income Tax and VAT returns can be made. A sole trader is personally liable for all the liabilities of his business.

Partnership

A partnership is a collection of individuals in business on their own account and whose constitution is generally governed by the Partnership Act 1890. It is strongly recommended that a partnership agreement is also established to determine the commercial relationship between the individuals concerned.

The requirements in relation to accounting records and returns are similar to those of a sole trader and in general a partner's liability is unlimited.

Limited company

This is the most common business entity. Companies are incorporated under the Companies Act 1985 which requires that an annual audit is carried out for all companies with a turnover in excess of £5,000,000 or a review if the turnover is less than £5,000,000 and that accounts are filed with the Companies Registrar. Generally an individual shareholder's liability is limited to the amount of the share capital he is required to subscribe.

Advantages

In view of the problems and costs of incorporating an existing business, it

is important to try and select the correct trading medium at the commencement of operations. It is not true to say that every business should start life as a company.

Many businesses are carried on in a safe and efficient manner by sole traders or partnerships. Whilst recognising the possible commercial advantages of a limited company, taxation advantages exist for sole traderships and partnerships, such as income tax deferral and National Insurance saving. No decision should be taken without first seeking professional advice.

The benefit of limited liability should not be ignored although this can largely be negated by banks seeking personal guarantees. In addition, it may be easier for the companies to raise finance because the bank can take security on the debts of the company that could be sold in the future, particularly if third-party finance has been obtained in the form of equity.

Self-assessment

From the tax year 1996/97 the burden of assessing tax shifted from the Inland Revenue to the individual tax payer. The main features of this system are as follows:

- the onus is on the taxpayer to provide information and to complete returns
- tax will be payable on different dates
- the taxpayer has a choice: he can calculate his tax liability at the same time as making his return and this will need to be done by 31st January following the end of the tax year. Alternatively, he can send in his tax return before 30 September and the Inland Revenue will calculate the tax to be paid on the following 31 January
- the important aspect to the system is that if the return is late, or the tax is paid late, there will be automatic penalties and/or surcharges imposed on the taxpayer.

Tax correspondence

Businessmen do not like letters from the Inland Revenue but they should resist the temptation to tear them up or put them behind the clock and

forget about them. All Tax Calculations and Statements of Account should be checked for accuracy immediately and any queries should be put to your accountant or sent to the Tax District that issued the document.

Keep copies of all correspondence with the Inland Revenue. Letters can be mislaid or fail to be delivered and it is essential to have both proof of what was sent as well as a permanent record of all correspondence.

Dates tax due

Income Tax

Payments on account (based on one half of last year's liability) are due on 31 January and 31 July. If these are insufficient there is a balancing payment due on the following 31 January – the same day as the tax return needs to be filed. For example:

for the year 2006/07 Tax due £5,000 (2005/06 was £4,000)
First payment on account of £2,000 is due on
31.01.07
Second payment on account of £2,000 is due on
31.07.07
Balancing payment of £1,000 is due on 31.01.08

Note that on 31.01.07, the first payment on account of £2,500 fell due for the tax year 2007/08.

Tax in business

Spouses in business

If spouses work in the business, perhaps answering the phone, making appointments, writing business letters, making up bills and keeping the books, they should be properly remunerated for it. Being a payment to a family member, the Inspector of Taxes will be understandably cautious in allowing remuneration in full as a business expense. The payment should be:

- actually paid to them, preferably weekly or monthly and in addition to any housekeeping monies
- recorded in the business book

- reasonable in amount in line with their duties and the time spent on them.

If the wages paid to them exceed £96.00 per week, Class 1 employer's and employee's NIC becomes due and if they exceed £5,225 p.a. (assuming they have no other income) PAYE tax will also be payable.

It should also be noted that once small businesses are well established and the spouses' earnings are approaching the above limits, consideration may be given to bringing them in as a partner. This has a number of effects:

- there is a reduced need to relate the spouse's income (which is now a share of the profits) to the work they do
- they will pay Class 2 and Class 4 NIC instead of the more costly Class 1 contributions and PAYE will no longer apply to their earnings but remember that, as partners, they have unlimited liability.

Premises

Many small businessmen cannot afford to rent or buy commercial premises and run their enterprises from home using part of it as an office where the books and vouchers, clients' records and trade manuals are kept and where estimates and plans are drawn up. In these circumstances, a portion of the outgoings on the property may be claimed as a business expenses. An accountant's advice should be sought to ensure that the capital gains tax exemption that applies on the sale of the main residence is not lost.

Fixed Profit Car Scheme

It may be advantageous to calculate your car expenses using a fixed rate per business mile. Ask your accountant about this. A proper record of business mileage must be kept.

Vehicles

Car expenses for sole traders and partners are usually split on a fractional

mileage basis between business journeys, which are allowable, and private ones, which are not, and a record of each should be kept. If the business does work only on one or two sites for only one main contractor, the inspector may argue that the true base of operations is the work site not the residence and seek to disallow the cost of travel between home and work. It is tax-wise and sound business practice to have as many customers as possible and not work for just one client.

Business entertainment

No tax relief is due for expenditure on business entertainment and neither is the VAT recoverable on gifts to customers, whether they are from this country or overseas. However, the cost of small trade gifts not exceeding £50 per person per annum in value is still admissible provided that the gift advertises the business and does not consist of food, drink or tobacco.

Income tax (2006/07)

Personal allowances

The current personal allowance for a single person is £5,035. The personal allowance for people aged 65 to 74 and over 75 years are £7,280 and £7,420 respectively. The married couple's allowance was withdrawn on 5 April 2000, except for those over 65 on that date.

Taxation of husband and wife

A married woman is treated in much the same way as a single person with her own personal allowance and basic rate band. Husband and wife each make a separate return of their own income and the Inland Revenue deals with each one in complete privacy; letters about the husband's affairs will be addressed only to him and about the wife's only to her unless the parties indicate differently.

Rates of tax

Tax is deducted at source from most banks and building societies accounts at the rate of 20%. The rates of tax for 2006/07 are as follows:

Lower rate: 10% on taxable income up to £2,150

Basic rate: 22% on taxable income between £2,150 and £33,300

Higher rate: 40% on taxable income over £33,300

Dividends carry a 10% non-repayable tax credit. Higher rate taxpayers pay a further tax on dividends of 22.5%.

Mortgage interest relief

This is no longer available after 5 April 2000.

Business losses

These are allowed only against the income of the person who incurs the loss. For example, a loss in the husband's business cannot be set against the wife's income from employment.

Joint income

In the case of joint ownership by a husband and wife of assets that yield income, such as bank and building society accounts, shares and rented property, the Inland Revenue will treat the income as arising equally to both and each will pay tax on one half of the income. If, however, the asset is owned in unequal shares or one spouse only and the taxpayer can prove this, then the shares of income to be taxed can be adjusted accordingly if a joint declaration is made to the tax office setting out the facts.

Capital Gains Tax

Where an asset is disposed of, the first £8,800 of the gain is exempt from tax. In the case of husbands and wives, each has a £8,800 exemption so if the ownership of the assets is divided between them, it is possible to claim exemption on gains up to £17,600 jointly in the tax year. Any remaining gain is chargeable as though it were the top slice of the individual's income; therefore according to his or her circumstances it might be charged at 10%, 22% or 40%.

Self-employed NIC rates (from 6 April 2006)

Class 2 rate

Charged at £2.10 per week. If earnings are below £5,035 per annum averaged over the year, ask the DSS about 'small income exception'. Details are in leaflet CA02.

Class 4 rate

Business profits up to £5,035 per annum are charged at NIL. Annual profits between £5,035 and £33,540 are charged at 8% of the profit. There is also a charge on profits over £33,540 of 1%. Class 4 contributions are collected by the Inland Revenue along with the income tax due.

Capital allowances (depreciation) rates

Plant and machinery:	25% (40% first-year allowance is available for certain small businesses)
Business motor cars - cost up to £12,000:	25%
- cost over £12,000:	£3,000 (maximum)

THE CONSTRUCTION INDUSTRY TAX DEDUCTION SCHEME

General

The new Construction Industry Tax Deduction Scheme is known as the 'revised CIS' scheme and replaced the old 'CIS' scheme. Everyone who carries out work in the Construction Industry Scheme must hold a registration card (CIS4) or a tax certificate (CIS6). Certain larger companies use a special certificate (CIS5).

A small business that does work only for the general public and small commercial concerns is outside the scheme and does not need a certificate to trade. If, however, it engages other contractors to do jobs for it, the business would have to trade under the scheme as a contractor and deduct tax from any payment made to a subcontractor who did not produce a valid (CIS6) certificate. If in doubt, consult your accountant or the Inland Revenue direct.

Under the revised scheme, registration cards, tax certificates and vouchers will no longer be used. Subcontractors will normally register with the Revenue. There will be two types of registration, registration for gross payment, applicable to those who previously qualified for a tax exemption certificate, and registration for payment under deduction, applicable to

all other subcontractors. The three-year qualifying period for gross payment will be reduced to one year (but the Revenue may cancel registration at any time where the qualifying conditions no longer apply, or where the rules have been breached). Unlike the present scheme contractors will be able to pay un-registered sub-contractors, but the deduction rate will be much higher (probably around 30%). Those who hold a subcontractor's certificate when the new provisions come into effect will be treated as being registered for gross payment and those who hold a registration card will be treated as registered for payment for deduction. Subcontractors holding temporary registration that expire before 6 April 2007 will have to register in the same way as new applicants.

For new workers, contractors will need to obtain basic identity details and will check with the Revenue what type of registration the worker holds. The verification may be done by telephone or over the internet. Contractors may assume that the status remains unchanged unless the Revenue notifies them to the contrary.

When contractors deduct tax from payments, they must supply the subcontractors with pay statements. Contractors will no longer be required to submit payment vouchers monthly. Instead, they will be required to submit monthly returns (even for those who make payments quarterly) and must provide details of recipients and payments made, together with a 'status declaration' that none of the payments relate to a contract of employment. This requirement puts the onus of establishing the worker's status on the contractor and there will be penalties for false declarations (and also various other penalties, as now, for both contractors and workers). The returns must be sent in every month, even if no payments have been made, and penalties will apply if a return is not submitted. Nil returns will be able to be made on paper, over the internet or by telephone. It is intended that other online services, such as subcontractor verification checks, will also be available.

VAT

The general rule about liability to register for VAT is given in the VAT office notes. It is possible to give here only a brief outline of how the tax works. The rules that apply to the construction industry are extremely complex and all traders must study *The VAT Guide* and other publications.

Registration for VAT is required if, at the end of any month, the value of taxable supplies in the last 12 months exceeds the annual threshold or if there are reasonable grounds for believing the value of the taxable supplies in the next 30 days will exceed the annual threshold.

Taxable supplies include any zero-rated items. The annual threshold is £64,000. The amount of tax to be paid is the difference between the VAT charged out to customers (*output tax*) and that suffered on payments made

to suppliers for goods and services (*input tax*) incurred in making taxable supplies. Unlike income tax there is no distinction in VAT for capital items so that the tax charged on the purchase of, for example, machinery, trucks and office furniture, will normally be reclaimable as *input tax*.

VAT is payable in respect of three monthly periods known as 'tax periods'. You can apply to have the group of tax periods that fits in best with your financial year. The tax must be paid within one month of the end of each tax period. Traders who receive regular repayments of VAT can apply to have them monthly rather than quarterly. Not all types of goods and services are taxed at 17.5% (i.e. the standard rate). Some are exempt and others are zero-rated.

Zero-rated

This means that no VAT is chargeable on the goods or services, but a registered trader can reclaim any *input tax* suffered on his purchases. For instance, a builder pays VAT on the materials he buys to provide supplies of constructing but if he is constructing a new dwelling house, this is zero rated. The builder may reclaim this VAT or set it off against any VAT due on standard rated work.

Exempt

Supplies that are exempt are less favourably treated than those that are zero rated. Again no VAT is chargeable on the goods or services but the trader cannot reclaim any *input tax* suffered on his purchases.

Standard-rated

All work which is not specifically stated to be zero rated or exempt is standard-rated, i.e. VAT is chargeable at the current rate of 17.5% and the trader may deduct any *input tax* suffered when he is making his return to the Customs and Excise. If for any reason a trader makes a supply and fails to charge VAT when he should have done so (e.g. mistakenly assuming the supply to be zero rated), he will have to account for the VAT himself out of the proceeds. If there is any doubt about the VAT position, it is safer to assume the supply is standard rated, charge the appropriate amount of VAT on the invoice and argue about it later.

Time of supply

The *time* at which a supply of goods or services is treated as taking place is important and is called the 'tax point'. VAT must be accounted for to the Customs and Excise at the end of the accounting period in which this 'tax

point' occurs. For the supply of goods which are 'built on site', the 'basic tax point' is the date the goods are made available for the customer's use, whilst for *services* it is normally the date when all work except invoicing is completed.

However, if you issue a tax invoice or receive a payment before this 'basic tax point' then that date becomes a tax point. In the case of contracts providing for stage and retention payments, the tax point is either the date the tax invoice is issued or when payment is received, whichever is the earlier.

All the requirements apply to sub-contractors and main contractors and it should be noted that, when a contractor deducts income tax from a payment to a sub-contractor (because he has no valid CIS6) VAT is payable on the full gross amount *before* taking off the income tax.

Annual accounting

It is possible to account for VAT other than on a specified three month period. Annual accounting provides for nine equal installments to be paid by direct debit with annual return provided with the tenth payment. £300,000.

Cash accounting

If turnover is below a specified limit, currently £660,000, a taxpayer may account for VAT on the basis of cash paid and received. The main advantages are automatic bad debt relief and a deferral of VAT payment where extended credit is given.

Bad debts

Relief is available for debts over 6 months.

Part Seven

GENERAL CONSTRUCTION DATA

General construction data

GENERAL CONSTRUCTION DATA**The metric system****Linear**

1 centimetre (cm)	=	10 millimetres (mm)
1 decimetre (dm)	=	10 centimetres (cm)
1 metre (m)	=	10 decimetres (dm)
1 kilometre (km)	=	1000 metres (m)

Area

100 sq millimetres	=	1 sq centimetre
100 sq centimetres	=	1 sq decimetre
100 sq decimetres	=	1 sq metre
1000 sq metres	=	1 hectare

Capacity

1 millilitre (ml)	=	1 cubic centimetre (cm ³)
1 centilitre (cl)	=	10 millilitres (ml)
1 decilitre (dl)	=	10 centilitres (cl)
1 litre (l)	=	10 decilitres (dl)

Weight

1 centigram (cg)	=	10 milligrams (mg)
1 decigram (dg)	=	10 centigrams (mcg)
1 gram (g)	=	10 decigrams (dg)
1 decagram (dag)	=	10 grams (g)
1 hectogram (hg)	=	10 decagrams (dag)

Conversion equivalents (imperial/metric)**Length**

1 inch	=	25.4 mm
1 foot	=	304.8 mm
1 yard	=	914.4 mm
1 yard	=	0.9144 m
1 mile	=	1609.34 m

Area

1 sq inch	=	645.16 sq mm
1 sq ft	=	0.092903 sq m
1 sq yard	=	0.8361 sq m
1 acre	=	4840 sq yards
1 acre	=	2.471 hectares

Liquid

1 lb water	=	0.454 litres
1 pint	=	0.568 litres
1 gallon	=	4.546 litres

Horse-power

1 hp	=	746 watts
1 hp	=	0.746 kW
1 hp	=	33,000 ft.lb/min

Weight

1 lb	=	0.4536 kg
1 cwt	=	50.8 kg
1 ton	=	1016.1 kg

Conversion equivalents (metric/imperial)

Length

1 mm	=	0.03937 inches
1 centimetre	=	0.3937 inches
1 metre	=	1.094 yards
1 metre	=	3.282 ft
1 kilometre	=	0.621373 miles

Area

1 sq millimetre	=	0.00155 sq in
1 sq metre	=	10.764 sq ft
1 sq metre	=	1.196 sq yards
1 acre	=	4046.86 sq m
1 hectare	=	0.404686 acres

Weight

1 kg	=	2.205 lbs
1 kg	=	0.01968 cwt
1 kg	=	0.000984 ton

Temperature equivalents

In order to convert Fahrenheit to Celsius deduct 32 and multiply by 5/9.

To convert Celsius to Fahrenheit multiply by 9/5 and add 32.

Fahrenheit	Celsius
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230	110.0
220	104.4
210	98.9
200	93.3
190	87.8
180	82.2
170	76.7
160	71.1
150	65.6
140	60.0
130	54.4
120	48.9
110	43.3
100	37.8
90	32.2
80	26.7
70	21.1
60	15.6
50	10.0
40	4.4
30	-1.1
20	-6.7
10	-12.2
0	-17.8

Areas and volumes

Figure	Area	Perimeter
Rectangle	Length $\times$ breadth	Sum of sides
Triangle	Base $\times$ half of perpendicular height	Sum of sides
Quadrilateral	Sum of areas of contained triangles	Sum of sides
Trapezoidal	Sum of areas of contained triangles	Sum of sides
Trapezium	Half of sum of parallel sides $\times$ perpendicular height	Sum of sides
Parallelogram	Base $\times$ perpendicular height	Sum of sides
Regular polygon	Half sum of sides $\times$ half internal diameter	Sum of sides
Circle	$\pi \times \text{radius}^2$	$\pi \times \text{diameter}$ or $\pi \times 2 \times \text{radius}$

Figure	Surface area	Volume
Cylinder	$\pi \times 2 \times \text{radius}^2 \times \text{length}$ (curved surface only)	$\pi \times 2 \times \text{radius}^2 \times \text{length}$
Sphere	$\pi \times \text{diameter}^2$	$\text{Diameter}^3 \times 0.5236$

Weights of materials	kg/m ³	kg/m ²	kg/m
Aggregate, coarse	1,500		
Ashes	800		
Ballast	600		

Weights of materials	kg/m³	kg/m²	kg/m
Blocks, natural aggregate			
75mm		160	
100mm		215	
140mm		300	
Blocks, lightweight aggregate			
75mm		60	
100mm		80	
140mm		112	
Bricks, Fletton		1820	
Bricks, engineering		2250	
Bricks, concrete		1850	
Brickwork, 112.5mm		220	
Brickwork, 215mm		465	
Brickwork, 327.5mm		710	
Cement	1,440		
Chalk	2,240		
Flint	2,550		
Gravel	1,750		
Hardcore	1,900		
Hoggin	1,750		
Lime, ground	750		
Stone, natural	2,400		
Stone, Portland	2,200		
Stone, reconstructed	2,250		
Stone, York	2,400		

EXCAVATION AND FILLING

Shrinkage of deposited material

Clay	-10%
Gravel	-7.50%
Sandy soil	-12.50%

Bulking excavated material

Clay	40%
Gravel	25%
Sand	20%

Typical fuel consumption for plant	Engine size kW	Litres per hour
Compressors up to	20.00	4.00
	30.00	6.50
	40.00	8.20
	50.00	9.00
	75.00	16.00
	100.00	20.00
	125.00	25.00
	150.00	30.00
Concrete mixers up to	5.00	1.00
	10.00	2.40
	15.00	3.80
	20.00	5.00
	20.00	5.00
Dumpers	5.00	1.30
	7.00	2.00
	10.00	3.00
	15.00	4.00
	20.00	4.90
	30.00	7.00
	50.00	12.00
Excavators	10.00	2.50
	20.00	4.50
	40.00	9.00
	60.00	13.00
	80.00	17.00

	Engine size kW	Litres per hour
Pumps	5.00	1.10
	10.00	2.10
	15.00	3.20
	20.00	4.20
	25.00	5.50

CONCRETE WORK

Concrete mixes	Cement t	Sand m3	Aggregate m3	Water litres
1:1:2	0.50	0.45	0.70	208.00
1:1:5:3	0.37	0.50	0.80	185.00
1:2:4	0.30	0.54	0.85	175.00
1:3:6	0.22	0.55	0.85	160.00

BRICKWORK AND BLOCKWORK

Bricks per m2 (brick size 215 × 103.5 × 65mm)	nr
Half brick wall	
stretcher bond	59
English bond	89
English garden wall bond	74
Flemish bond	79
One brick wall	
English bond	118
Flemish bond	118

Bricks per m2 (cont'd) **nr**

One and a half brick wall

English bond 178

Flemish bond 178

Two brick wall

English bond 238

Flemish bond 238

Metric modular bricks

200 × 100 × 75mm

90mm thick 133

190mm thick 200

200 × 100 × 100mm

90mm thick 50

190mm thick 100

290mm thick 150

300 × 100 × 75mm

90mm thick 44

300 × 100 × 100mm

90mm thick 50

Blocks per m2 (block size 414 × 215mm)

60mm thick 9.9

75mm thick 9.9

100mm thick 9.9

140mm thick 9.9

190mm thick 9.9

215mm thick 9.9

Mortar per m²	Wirecut m³	1 Frog m³	2 Frogs m³
Brick size 215 × 103.5 × 65mm			
Half brick wall	0.017	0.024	0.031
One brick wall	0.045	0.059	0.073
One and a half brick wall	0.072	0.093	0.114
Two brick wall	0.101	0.128	0.155
Brick size 200 × 100 × 75mm			
	Solid m³		Perforated m³
90mm thick	0.016		0.019
190mm thick	0.042		0.048
290mm thick	0.068		0.078
Brick size 200 × 100 × 100mm			
90mm thick	0.013		0.016
190mm thick	0.036		0.041
290mm thick	0.059		0.067
Brick size 200 × 100 × 100mm			
90mm thick	0.015		0.018
Block size 440 × 215mm			
60mm thick	0.004		
75mm thick	0.005		
100mm thick	0.006		
140mm thick	0.007		
190mm thick	0.008		
215mm thick	0.009		

MASONRY**Mortar per m2 of random rubble walling** **m3**

300mm thick wall	0.120
450mm thick wall	0.160
550mm thick wall	0.120

EXTERNAL WORKS**Blocks/slabs per m2** **nr/m2**

200 × 100mm	50.00
450 × 450mm	4.93
600 × 450mm	3.70
600 × 600mm	2.79
600 × 750mm	2.22
600 × 900mm	1.85

Drainage trench widths

	Under 1.5m deep mm	Over 1.5m deep mm
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Pipe diameter 100mm	450	600
Pipe diameter 150mm	500	650
Pipe diameter 225mm	600	750
Pipe diameter 300mm	650	800

Volumes of filling for pipe beds (m3 per m)

	50mm thick	100mm thick	150mm thick
Pipe diameter 100mm	0.023	0.045	0.068
Pipe diameter 150mm	0.026	0.053	0.079
Pipe diameter 225mm	0.030	0.060	0.090
Pipe diameter 300mm	0.038	0.075	0.113

**Volumes of filling for pipe
bed and haunching
(m³ per m)**

m³

Pipe diameter 100mm	0.117
Pipe diameter 150mm	0.152
Pipe diameter 225mm	0.195
Pipe diameter 300mm	0.279

**Volumes of filling for pipe
bed and surround
(m³ per m)**

m³

Pipe diameter 100mm	0.185
Pipe diameter 150mm	0.231
Pipe diameter 225mm	0.285
Pipe diameter 300mm	0.391

Part Eight

PLANT NAMES

English/Latin plant names

Latin/English plant names

ENGLISH/LATIN PLANT NAMES

Common/English

Scientific/Latin

Adam's Needle

Yucca gloriosa

Alder

Alnus

Alder Buckhorn

Frangula alnus

Algerian Iris

Iris unguicularis

Apple

Malus

Ash

Fraxinus

Atlantic Cedar

Cedrus libani atlantica

Austrian Pine

Pinus nigra austriaca

Balsam Poplar

Populus balsamifera

Bamboo

Pseudosasa japonica

Bay

Laurus nobilis

Bay Willow

Salix pentandra

Bear Tree

Arctostaphylos uva-ursi

Beech

Fagus

Birch

Betula

Bird Cherry

Prunus padus

Black Poplar

Populus nigra

Black Stemmed Bamboo

Phyllostachys nigra

Black Walnut

Juglans nigra

Blackthorn

Prunus spinosa

Bladder Nut

Staphylea colchica

Blue Holly

Ilex x meserveae

Boston Ivy

Parthenocissus tricuspidata

Box

Buxus

Bramble

Rubus

Broom

Cytisus

Broom

Cytisus scorparius

Bugle

Ajuga

Butchers Broom

Ruscus aculeatus

Butterbur

Petastites hybridus

Canary Ivy

Hedera canariensis

Cape Figwort

Phygellus capensis coccineus

Cedar

Cedrus

Common/English

Cherry
 Cherry Laurel
 Chestnut Holly
 Christmas Box
 Chusan Palm
 Comfrey
 Common Alder
 Common Ivy
 Corsican Pine
 Crab Apple
 Crack Willow
 Cranesbill
 Cricket Bat Willow
 Cucumber Tree
 Current
 Cypress

Daisy Bush
 Dawn Redwood
 Day Lily
 Dog Rose
 Dogwood
 Douglas Fir
 Downy Birch
 Dwarf Almond
 Dyers Greenweed

Eglantine or Sweet Briar
 Elder
 Elephant's Ears
 Elisha's Tears
 Evergreen Magnolia
 Evergreen Oak

False Acacia
 Field Maple

Scientific/Latin

Prunus
 Prunus laurocreasus
 Ilex x koeheana
 Sarcococca
 Trachycarpus fortunei
 Symphytum
 Alnus glutinosa
 Hedera helix
 Pinus nigra maritima
 Malus
 Salix fragilis
 Geranium
 Salix alba Caerulea
 Magnolia acuminata
 Ribes
 Cupressus

Olearia
 Metasequoia glyptostroboides
 Hemerocallis
 Rosa canina
 Cornus
 Pseudotsuga menziesii
 Betula pubescens
 Prunus tenella
 Genista tinctoria

Rosa rubiginosa
 Sambucus
 Bergeia
 Leycesteria Formosa
 Magnolia grandiflora
 Quercus ilex

Robinia pseudoacacia
 Acer campestre

Common/English

Scientific/Latin

Field Rose
Fig
Fir
Firethorn
Flowering Ash
Flowering Quince
Fly Honeysuckle
Foxglove Tree

Rosa arvensis
Ficus carica
Abies
Pyracantha
Fraxinus ornus
Chaenomeles
Lonicera xylostenum
Paulownia

Germander
Giants Reed
Giant Rhubarb
Gladwyn
Goat Willow/Sallow
Goats Beard
Golden Hop
Golden Oat
Golden Rain
Gorse
Grapevine
Grey Alder
Guelder Rose

Teucrium
Arundo donax
Gunnera manicata
Iris foetidissima
Salix caprea
Aruncus dioicus
Humulus lupulus aureus
Stipa gigantea
Koeleria paniculata
Ulex
Vitis vinifera
Alnus incana
Viburnum opulus

Handkerchief Tree
Hard Fern
Hawthorn
Hazel
Heath
Heather
Hedging Privet
Hemlock
Holly
Holly
Honey Locust
Honeysuckle
Hop Hornbeam

Davidia involucre
Blechnum spicant
Crataegus monogyna
Corylus avellana
Erica
Calluna vulgaris
Ligustrum ovalifolium
Tsuga heterophylla
Ilex
Ilex aquifolium
Gleditsia
Lonicera
Ostrya virginiana

Common/English

Hop Tree
Hornbeam
Horse Chestnut
Hungarian Oak
Hyssop

Indian Bean Tree
Indian Chestnut
Irish Yew
Iron Tree
Italian Alder
Italian Cypress
Ivy

Japanese Anemone
Japanese Anemone
Japanese Cedar
Japanese Honeysuckle
Japanese Larch
Japanese Maple
Jasmine
Jerusalem Sage
Judas Tree
Juniper

Kiwi Fruit
Knotweed

Lads Love
Lady Fern
Larch
Large-Leaved Lime
Lauristinus
Lavender
Lavender Cotton
Lawson's Cypress

Scientific/Latin

Ptelea trifoliata
Carpinus betulus
Aesculus hippocastanum
Quercus frainetto
Hyssopus officinalis

Catalpa bignonioides
Aesculus indica
Taxus baccata Fastigiata
Parrotia persica
Alnus cordata
Cupressus sempervirens Stricta
Hedera

Anemone hupehensis japonica
Anemone x hybrida
Cryptomeria japonica
Lonicera japonica
Larix kaempferi
Acer palmatum
Jasminium officinale
Phlomis fruticosa
Cercis siliquastrum
Juniperus communis

Actinida chinensis
Polygonum

Artemisia abrotanum
Athyrium filix-femina
Larix
Tilia platyphyllos
Viburnum tinus
Lavandula
Santolina
Chamaecyparis lawsoniana

Common/English

Scientific/Latin

Lebanese Cedar
Lenten Rose
Leyland Cypress
Lilac
Lily Turf
Lime
London Plane
Loquat

Cedrus libani
Hellborus orientalis
Cupressocyparis leylandii
Syringa
Liriope muscari
Tilia
Platanus acerifolia
Eriobotrya japonica

Male Fern
Maple
Medlar
Mexican Orange
Mimosa
Mock Orange
Morello Cherry
Moss Rose
Mulberry
Myrtle

Dryopteris filix-mas
Acer
Mespilus germanica
Choisya
Acacia dealbata
Philadelphus
Prunus avium Morello
Rosa x centifolia Muscosa
Morus nigra
Myrtus communis

New Zealand Flax
Norway Maple
Norway Spruce

Phormium
Acer platanoides
Picea abies

Oak
Oregon Grape
Osier

Quercus robur
Mahonia aquifolium
Salix viminalis

Pagoda Tree
Pampas Grass
Passion Flower
Pear
Periwinkle
Persian Ivy
Pine
Plane

Sophora japonica
Cortaderia
Passiflora caerulea
Pyrus
Vinca
Hedera colchica
Pinus
Platanus

Common/English

Polypody
 Poplar
 Portuguese Laurel
 Privet

Quince

Red Hot Poker
 Red Oak
 Redwood
 Rock Rose
 Rosa
 Rose of Sharon
 Rosemary
 Rowan
 Royal Fern
 Rue

Sage
 Sallow
 Salt Bush
 Scarlet Oak
 Scotch Rose
 Scots Pine
 Sea Buckhorn
 Sedge
 Shrubby Cinqufoil
 Shuttlecock Fern
 Silver Birch
 Silver Lime
 Silver Maple
 Small-Leaved Lime
 Smoke Bush
 Snowberry
 Snowy Mespilus
 Southern Beech

Scientific/Latin

Polypodium
 Populus
 Prunus lusitanica
 Ligustrum

Cydonia oblonga

Kniphofla
 Quercus rubra
 Sequoia sempervirens
 Helianthemum
 Rose
 Hypericum calycinum
 Rosmarinus
 Sorbus aucuparia
 Osmunda regalis
 Ruta graveoleans

Salvia
 Salix cinerea
 Atriplex halimus
 Quercus coccinea
 Rosa pimpinellifolia
 Pinus sylvestris
 Hippophae rhamnoides
 Carex
 Potentilla
 Matteuccia struthiopteris
 Betula pendula
 Tilia tomentosa
 Acer saccharinum
 Tilia cordata
 Cotinus
 Symphoricarpus
 Amelanchier
 Nothofagus

Common/English

Spanish Broom
Spanish Chestnut
Spindle
Spindle Tree
Spuce
Spurge
Spurge Laurel
Sycamore

Tamarisk
Tealeaf Willow
Thyme
Tree Lupin
Tree Peony
Tree Poppy
Tree Heaven
Tulip Tree
Turkey Oak

Vine
Virginia Creeper
Violet Willow

Walnut
Wayfaring Tree
Weeping Willow
Wellingtonia
Western Red Cedar
White Mulberry
White Poplar
White Willow
Whitebeam
Wild Apple
Wild Privet
Wild Service Tree
Willow/Sallow

Scientific/Latin

Spartium junceum
Castanea sativa
Spindle Euonymus
Euonymus europaeus
Picea
Euphorbia
Rosa rubiginosa
Acer pseudoplatanus

Tamarix
Salix phylicifolia
Thymus
Lupinus arboreus
Paeonia
Romneya coulteri
Ailanthus
Liriodendron tulipifera
Quercus cerris

Vitis
Parthenocissus quinquefolia
Salix daphnoides

Juglans regia
Viburnum lantana
Salix sepulchralis Chrysocoma
Sequoiadendron giganteum
Thuja plicata
Morus alba
Populus alba
Salix alba
Sorbus aria
Malus sylvestris
Ligustrum vulgare
Sorbus torminalis
Salix

Common/English

Willow
Wing Nut
Winter Honeysuckle
Winter Jasmine
Winterswee
Witch Hazel
Wood Spurge
Woodland Hawthorn
Woody Nightshade
Woody Willow
Wormwood

Yarrow
Yew

Scientific/Latin

Salix reifenweide
Pterocaya fraxinifolia
Lonicera x purpusii
Jasminium nudiflorum
Chimonanthust
Hamamelis
Euphorbia amygdaloides
Crataegus oxyacantha
Solanum dulcamara
Salix lanata
Artemisia absinthium

Achillea millefolium
Taxus

LATIN/ENGLISH PLANT NAMES
Scientific/Latin

Abies
Acacia dealbata
Acer
Acer campestre
Acer palmatum
Acer platanoides
Acer pseudoplatanus
Acer saccharinum
Acer saccharum
Achillea millefolium
Actinida chinensis
Aesculus hippocastanum
Aesculus indica
Ailanthus alitissima
Ajuga
Alnus

Common/English

Fir
Mimosa
Maple
Field Maple
Japanese Maple
Norway Maple
Sycamore
Silver Maple
Sugar Maple
Yarrow
Kiwi Fruit
Horse Chestnut
Indian Chestnut
Tree of Heaven
Bugle
Alder

Scientific/Latin

Common/English

<i>Alnus cordata</i>	Italian Alder
<i>Alnus glutinosa</i>	Common Alder
<i>Alnus incana</i>	Grey Alder
<i>Amelanchier</i>	Snowy Mespilus
<i>Anemone hupehensis japonica</i>	Japanese Anemone
<i>Anemone x hybrida</i>	Japanese Anemone
<i>Arbutus unedo</i>	Strawberry Tree
<i>Arctostaphylos uva-ursi</i>	Bear Tree
<i>Artemisia abrotanum</i>	Lads Love
<i>Artemisia absinthium</i>	Wormwood
<i>Aruncus dioicus</i>	Goats Beard
<i>Arundo donax</i>	Giants Reed
<i>Athyrium filix-femina</i>	Lady Fern
<i>Atriplex halimus</i>	Salt Bush
<i>Bergenia</i>	Elephant's Ears
<i>Betula</i>	Birch
<i>Betula papyrifera</i>	Paper Birch
<i>Betula pendula</i>	Silver Birch
<i>Betula pubescens</i>	Downy Birch
<i>Blechnum spicant</i>	Hard Fern
<i>Buxus</i>	Box
<i>Buxus sempervirens</i>	Box
<i>Calluna vulgaris</i>	Heather
<i>Carex</i>	Sedge
<i>Carpinus betulus</i>	Hornbeam
<i>Castanea sativa</i>	Spanish Chestnut
<i>Catalpa bignonioides</i>	Indian Bean Tree
<i>Cedrus</i>	Cedar
<i>Cedrus libani</i>	Lebanese Cedar
<i>Cedrus libani atlantica</i>	Atlantic Cedar
<i>Cercis siliquastrum</i>	Judas Tree
<i>Chaenomeles</i>	Flowering Quince
<i>Chamaecyparis lawsoniana</i>	Lawson's Cypress
<i>Chimonanthus</i>	Wintersweet

Scientific/Latin	Common/English
Choisya	Mexican Orange
Cistus	Sun Rose
Cornus	Dogwood
Cortaderia	Pampas Grass
Corylus avellana	Hazel
Cotinus	Smoke Bush
Crataegus monogyna	Hawthorn
Crataegus oxyacantha	Woodland Hawthorn
Cryptomeria japonica	Japanese Cedar
Cupressocyparis leylandii	Leyland Cypress
Cupressus	Cypress
Cupressus sempervirens Stricta	Italian Cypress
Cydonia oblonga	Quince
Cytisus	Broom
Cytisus scorpiarius	Broom
Daphne laureola	Spurge Laurel
Davidia involucreta	Handkerchief Tree
Dryopteris filix-mas	Male Fern
Erica	Heath
Eriobotrya japonica	Loquat
Euonymus	Spindle
Euonymus europaeus	Spindle Tree
Euphorbia	Spurge
Euphorbia amygdaloides	Wood Spurge
Fagus	Beech
Ficus carica	Fig
Frangula alnus	Alder Buckhorn
Fraxinus	Ash
Fraxinus ornus	Flowering Ash
Genista tinctoria	Dyers Greenweed
Geranium	Cranesbill
Gleditsia	Honey Locust

Scientific/Latin

Common/English

Gunnera manicata

Giant Rhubarb

Hamamelis

Witch Haze

Hedera

Ivy

Hedera canariensis

Canary Ivy

Hedera colchica

Persian Ivy

Hedera helix

Ivy

Helianthemum

Rock Rose

Hellborus foetidus

Stinking Hellebore

Hellborus orientalis

Lenten Rose

Hemerocallis

Day Lily

Hippophae rhamnoides

Sea Buckhorn

Humulus lupulus aureus

Golden Hop

Hypericum calycinum

Rose of Sharon

Hyssopus officinalis

Hyssop

Ilex

Holly

Ilex aquifolium

Holly

Ilex x koeheana

Chestnut Holly

Ilex x meserveae

Blue Holly

Iris foetidissima

Gladwyn

Iris unguicularis

Algerian Iris

Jasminum nudiflorum

Winter Jasmine

Jasminum officinale

Jasmine

Juglans nigra

Black Walnut

Juglans regia

Walnut

Juniperus

Juniper

Juniperus communis

Juniper

Kniphofia

Red Hot Poker

Koelreute

Golden Rain

Larix

Larch

Larix kaempferi

Japanese Larch

Laurus nobilis

Bay

Scientific/Latin
Common/English

Lavandula
 Leycesreria formosa
 Ligustrum
 Ligustrum ovalifolium
 Ligustrum vulgare
 Liriodedrun tulipifera
 Liriope muscari
 Lonicera
 Lonicera japonica
 Lonicera x purpusii
 Lonicera xylostenum
 Lupinus arboreus

Lavender
 Elisha's Tears
 Privet
 Hedging Privet
 Wild Privet
 Tulip Tree
 Lily Turf
 Honeysuckle
 Japanese Honeysuckle
 Winter Honeysuckle
 Fly Honeysuckle
 Tree Lupin

Magnolia acuminata
 Magnolia grandiflora
 Mahonia aquifolium
 Malus
 Malus sylvestris
 Matteuccia struthiopteris
 Mespilus germanica
 Metasequoia glyptostroboides
 Morus alba
 Morus nigra
 Myrtus communis

Cucumber Tree
 Evergreen Magnolia
 Oregon Grape
 Apple
 Wild Apple
 Shuttlecock Fern
 Medlar
 Dawn Redwood
 White Mulberry
 Mulberry
 Myrtle

Nothofagus

Southern Beech

Olearia
 Osmunda regalis
 Ostrya virginii

Daisy Bush
 Royal Fern
 Hop Hornbeam

Paeonia
 Parrotia persica
 Parthenocissus quinquefolia
 Parthenocissus tricuspidata
 Passiflora caerulea

Tree Peony
 Iron Tree
 Virginia Creeper
 Boston Ivy
 Passion Flower

Scientific/Latin

Common/English

Paulownia	Foxglove Tree
Petastites hybridus	Butterbur
Philadelphus	Mock Orange
Phlomis fruticosa	Jerusalem Sage
Phormium	New Zealand Flax
Phygelius capensis coccineus	Cape Figwort
Phyllostachys nigra	Black Stemmed Bamboo
Picea	Spruce
Picea abies	Norway Spruce
Picea omorika	Serbian Spruce
Picea sitchensis	Sitka Spruce
Pinus	Pine
Pinus nigra austriaca	Austrian Pine
Pinus nigra maritime	Corsican Pine
Pinus sylvestris	Scots Pine
Platanus	Plane
Platanus acerifolia	London Plane
Polygonum	Knotweed
Polypodium	Polypody
Populus	Poplar
Populus alba	White Poplar
Populus balsamifera	Balsam Poplar
Populus nigra	Black Poplar
Potentilla	Shrubby Cinqufoil
Prunus	Cherry
Prunus avium Morello	Morello Cherry
Prunus laurocreasus	Cherry Laurel
Prunus lusitanica	Portuguese Laurel
Prunus mahaleb	St Lucia Cherry
Prunus padus	Bird Cherry
Prunus spinosa	Blackthorn
Prunus tenella	Dwarf Almond
Pseudosasa japonica	Bamboo
Pseudotsuga menziesii	Douglas Fir
Ptelea trifoliata	Hop Tree
Pterocarya fraxinifolia	Wing Nut

Scientific/Latin	Common/English
Pyracantha	Firethorn
Pyrus	Pear
Quercus	Oak
Quercus cerris	Turkey Oak
Quercus coccinea	Scarlet Oak
Quercus frainetto	Hungarian Oak
Quercus ilex	Evergreen Oak
Quercus petraea	Sessile Oak
Quercus robur	Oak
Quercus rubra	Red Oak
Rhus typhina	Sumach
Ribes	Current
Robinia pseudoacacia	False Acacia
Romneya coulteri	Tree Poppy
Rosa	Rose
Rosa arvensis	Field Rose
Rosa canina	Dog Rose
Rosa pimpinellifolia	Scotch Rose
Rosa rubiginosa	Eglantine or Sweet Briar
Rosa x centifolia Muscosa	Moss Rose
Rosmarinus	Rosemary
Rubus	Bramble
Ruscus aculeatus	Butchers Broom
Ruta graveoleans	Rue
Salix	Willow/Sallow
Salix alba	White Willow
Salix alba Caerulea	Cricket Bat Willow
Salix caprea	Goat Willow/Sallow
Salix cinerea	Sallow
Salix daphnoides	Violet Willow
Salix fragilis	Crack Willow
Salix lanata	Woody Willow
Salix pentandra	Bay Willow

Scientific/Latin

Common/English

Salix phylicifolia	Tealeaf Willow
Salix viminalis	Osier
Salix x sepulchralis Chrysocoma	Weeping Willow
Salvia	Sage
Sambucus	Elder
Santolina	Lavender Cotton
Sarcococca	Christmas Box
Sedum	Stonecrop
Sequoia sempervirens	Redwood
Sequoiadendron giganteum	Wellingtonia
Solanum dulcamara	Woody Nightshade
Sophora japonica	Pagoda Tree
Sorbus aria	Whitebeam
Sorbus aucuparia	Rowan
Sorbus terminalis	Wild Service Tree
Spartium junceum	Spanish Broom
Staphylea colchica	Bladder Nut
Stipa gigantea	Golden Oat
Symphoricarpus	Snowberry
Symphytum	Comfrey
Syringa	Lilac
Tamarix	Tamarisk
Taxus	Yew
Taxus baccata Fastigiata	Irish Yew
Teucrium	Germander
Thuja plicata	Western Red Cedar
Thymus	Thyme
Tilia	Lime
Tilia cordata	Small-Leaved Lime
Tilia platyphyllos	Large-Leaved Lime
Tilia tomentosa	Silver Lime
Trachycarpus fortunei	Chusan Palm
Tsuga heterophylla	Hemlock
Ulex	Gorse

Scientific/Latin

Viburnum lantana

Viburnum opulus

Viburnum tinus

Vinca

Vitis

Vitis vinifera

Yucca gloriosa

Common/English

Wayfaring Tree

Guelder Rose

Lauristinus

Periwinkle

Vine

Grapevine

Adam's Needle

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